

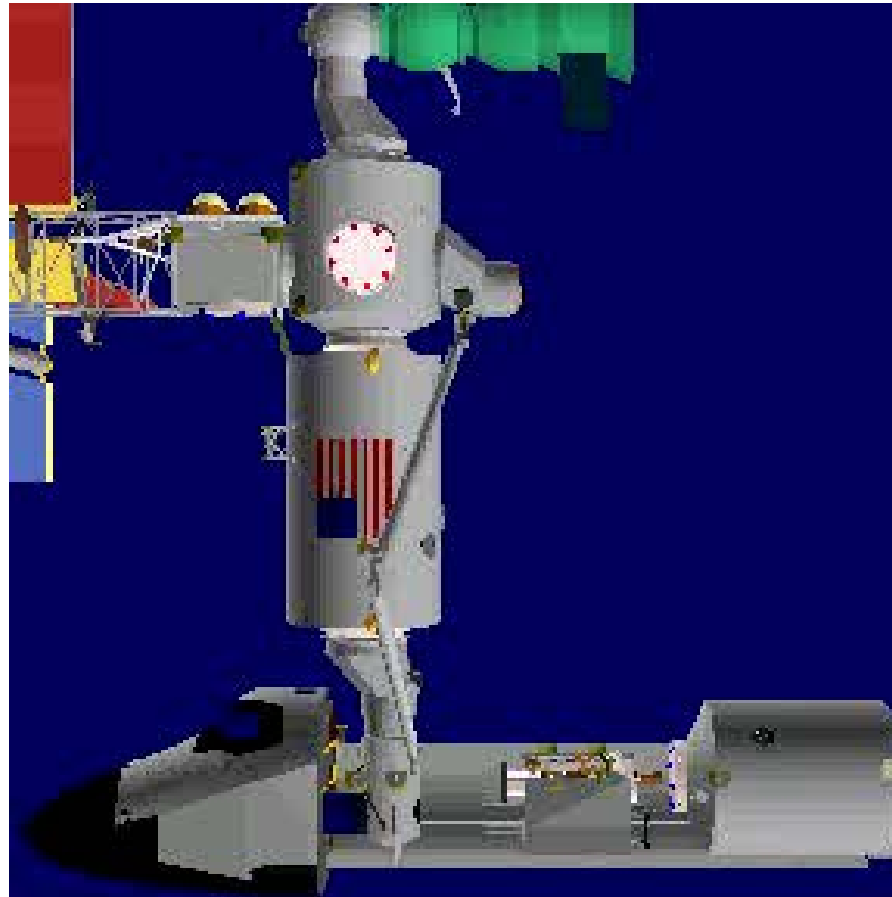
STS-100 ISS Flight 6A

Gerald Maxwell

Project Manager

MSFC

6A Movie



Liftoff – STS 100

- Trailing a plume of smoke, Space Shuttle Endeavour pierces a small cloud, briefly lighting it from within, during launch on mission STS-100. Liftoff of the ninth flight to the International Space Station occurred at 2:40:42 p.m. EDT. The 11-day mission will deliver and integrate the Spacelab Logistics Pallet/Launch Deployment Assembly, which includes the Space Station Remote Manipulator System and the UHF Antenna. The mission includes two planned spacewalks for installation of the SSRMS on the Station. Also onboard is the Multi-Purpose Logistics Module Raffaello, carrying resupply stowage racks and resupply/return stowage platforms.

STS-100 Crew Insignia

American, Russian, Canadian, & Italian astronauts compose the crew

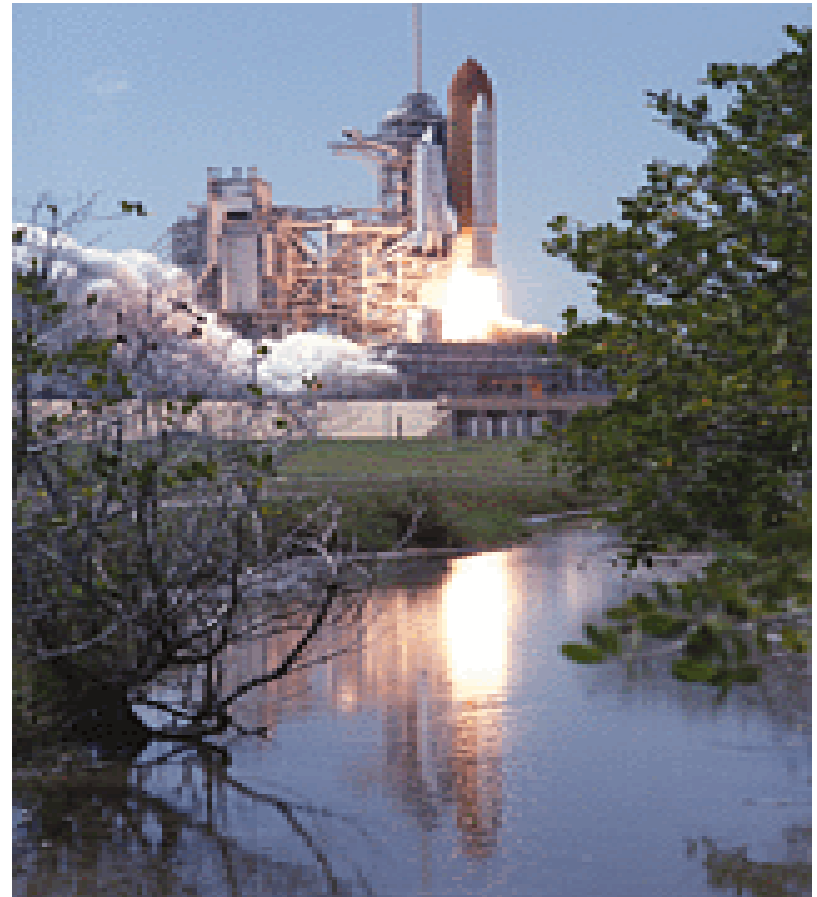


Crew Shirt Logo



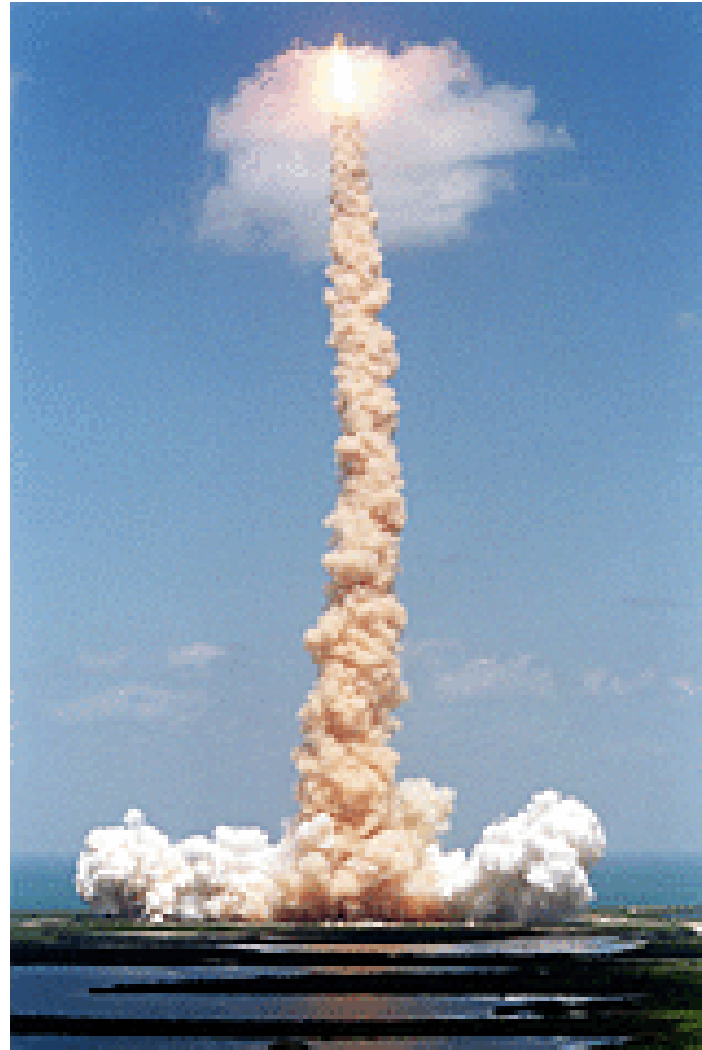
Seated are astronauts Kent V. Rominger, (left) and Jeffrey S. Ashby, commander and pilot, respectively. Standing (from the left) are cosmonaut Yuri V. Lonchakov with astronauts Scott E. Parazynski, Umberto Guidoni of the European Space Agency, Chris A. Hadfield, and John L. Phillips, all mission specialists.







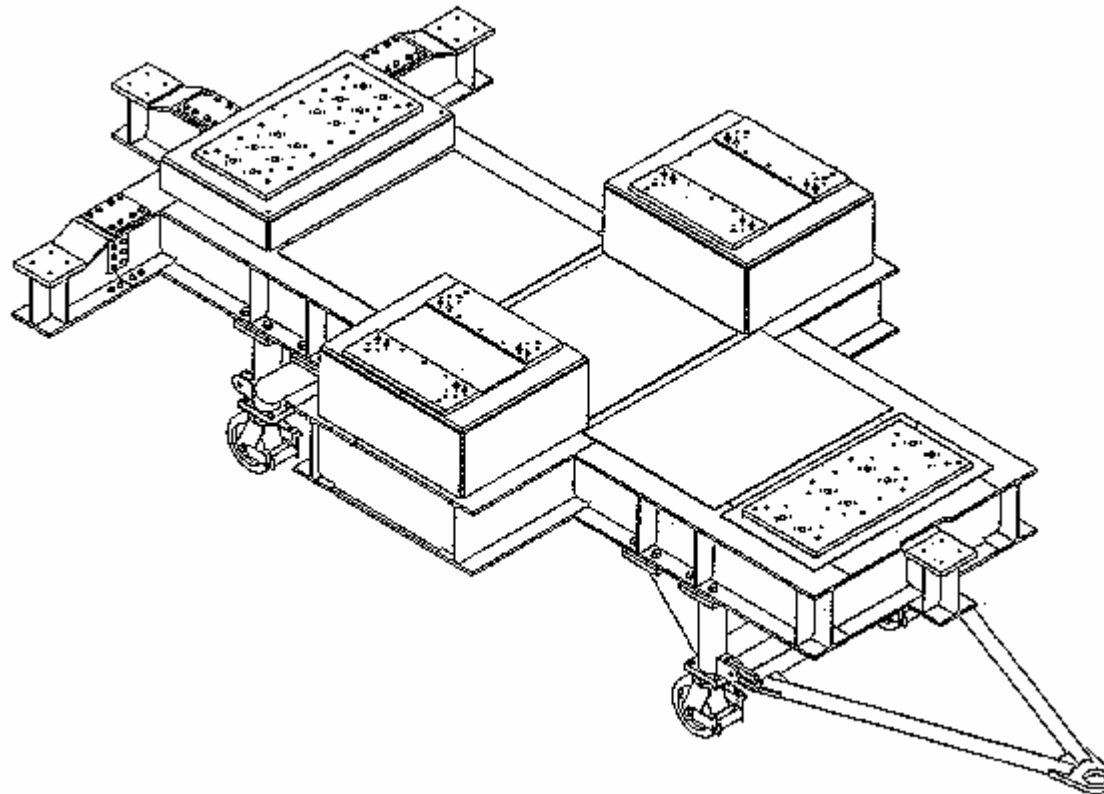
A perfect liftoff of Space Shuttle Endeavour on mission STS-100



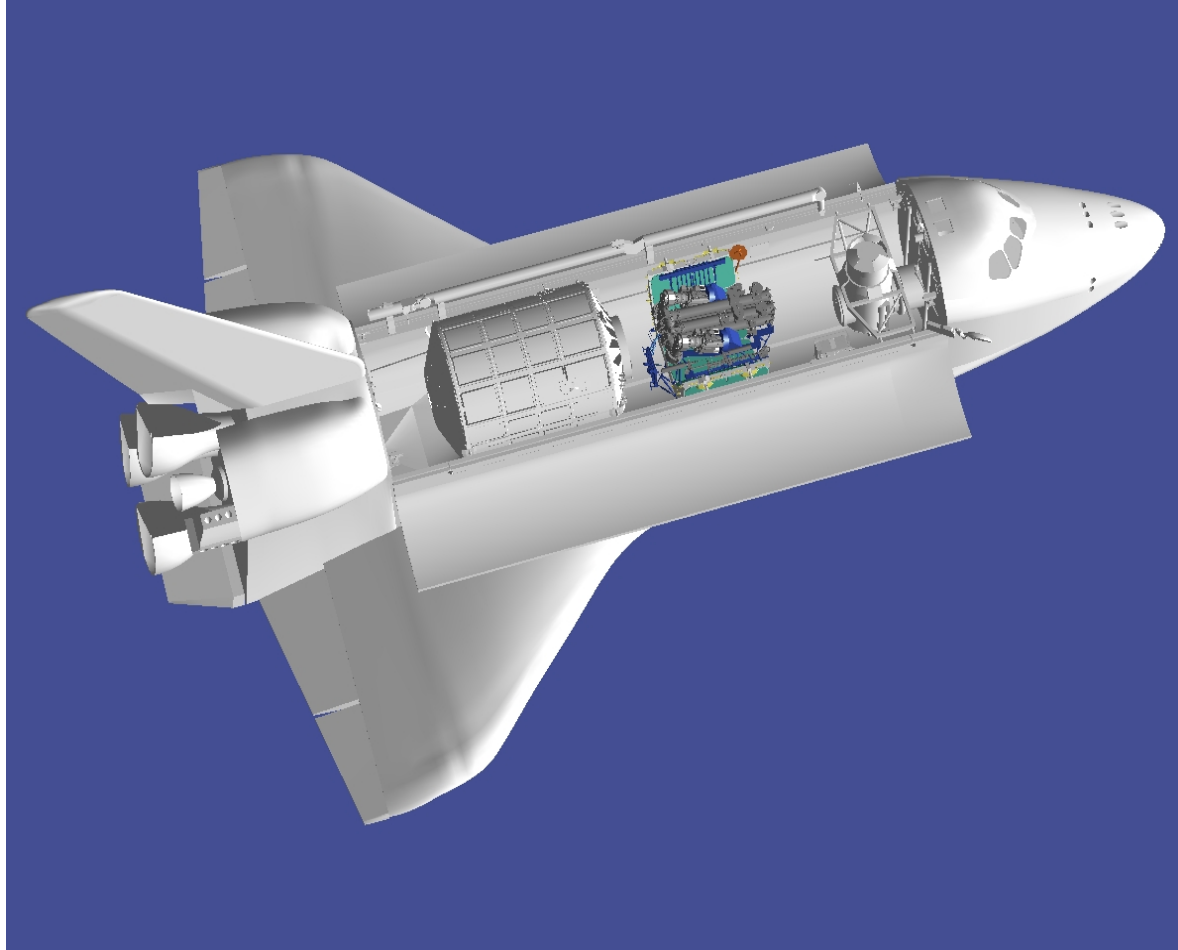
The SSRMS arrives by truck at Kennedy Space Center.

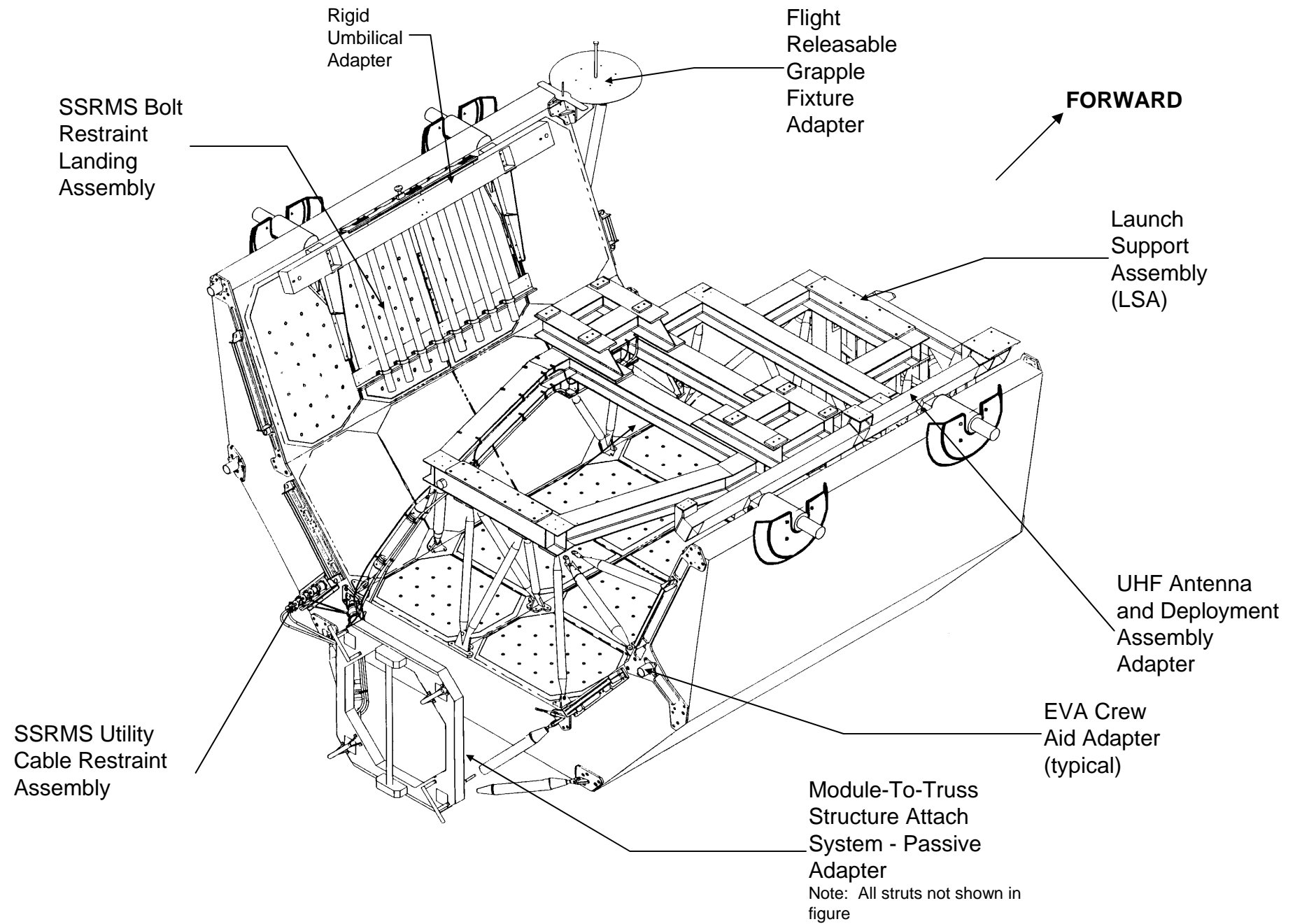


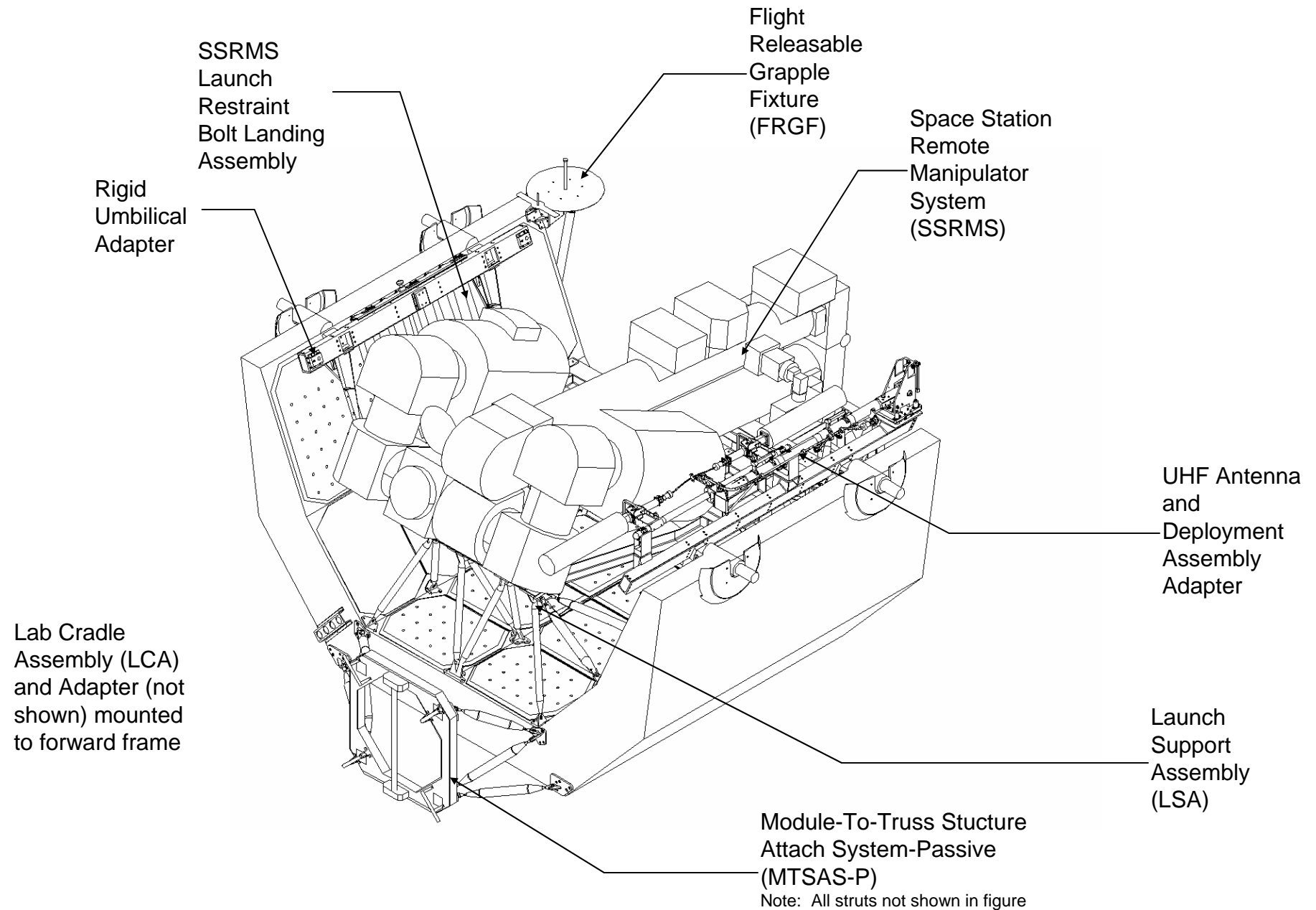
Interface Development Tool



6A Shuttle Bay



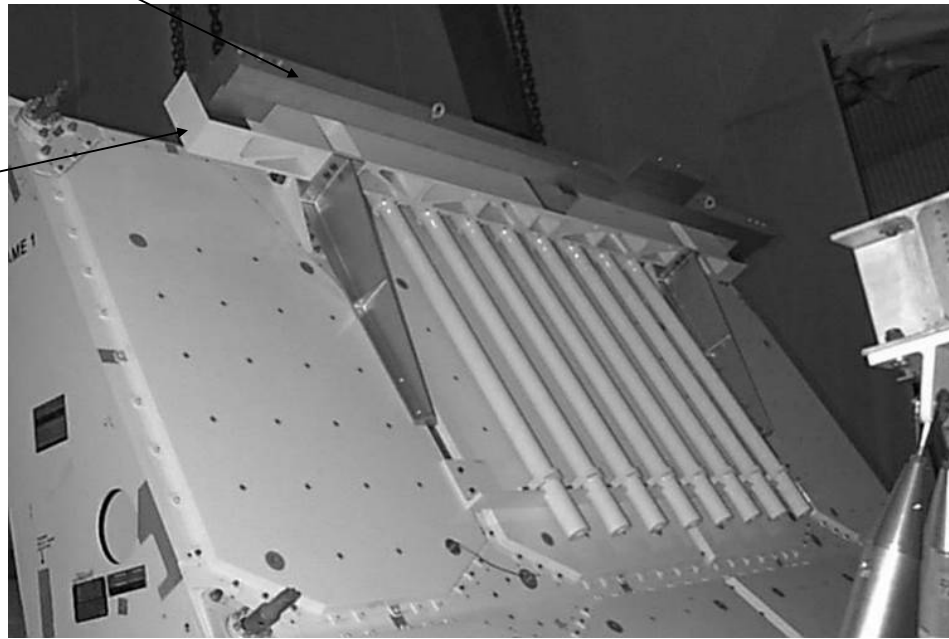




Rigid Umbilical Adapter

RU Mass
Simulator

RU Adapter



SSRMA Attachment to LSA

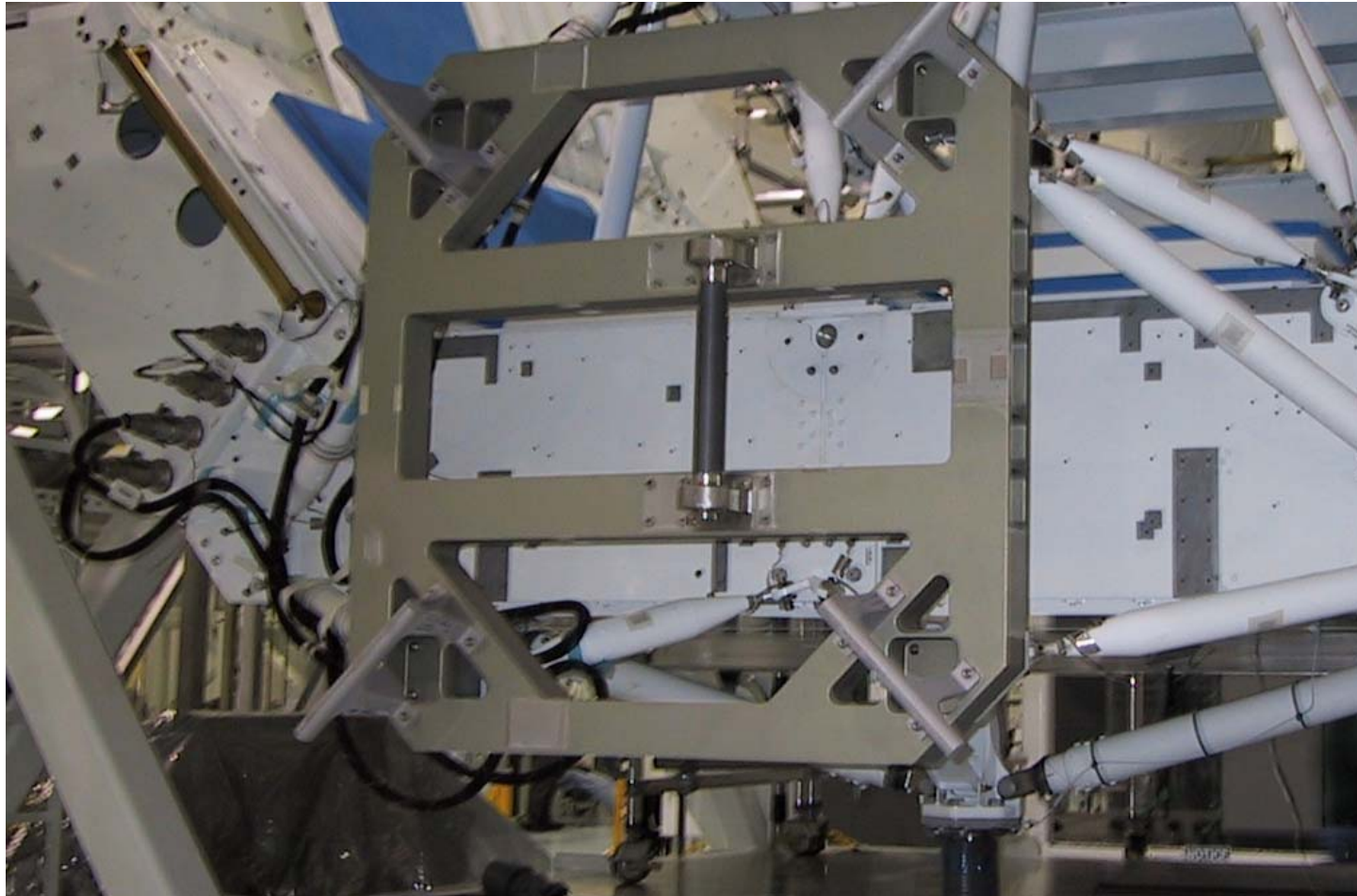




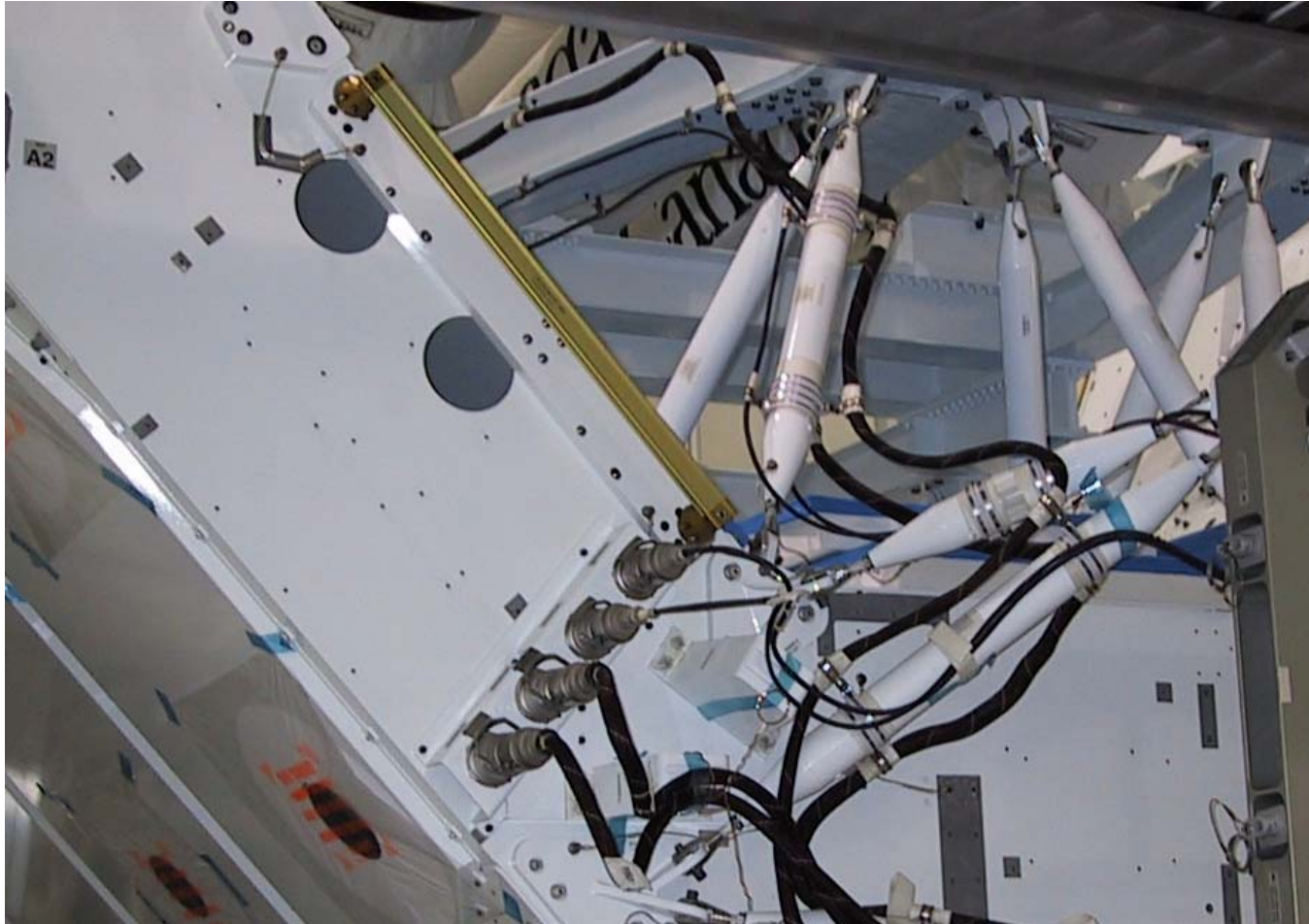
Padding for Walking on SLP



MTSAS-P



Handrail & Cabeling



Work Interface (WIF)Tool 1



Work Interface (WIF)Tool 2



Work Interface (WIF)Tool 3



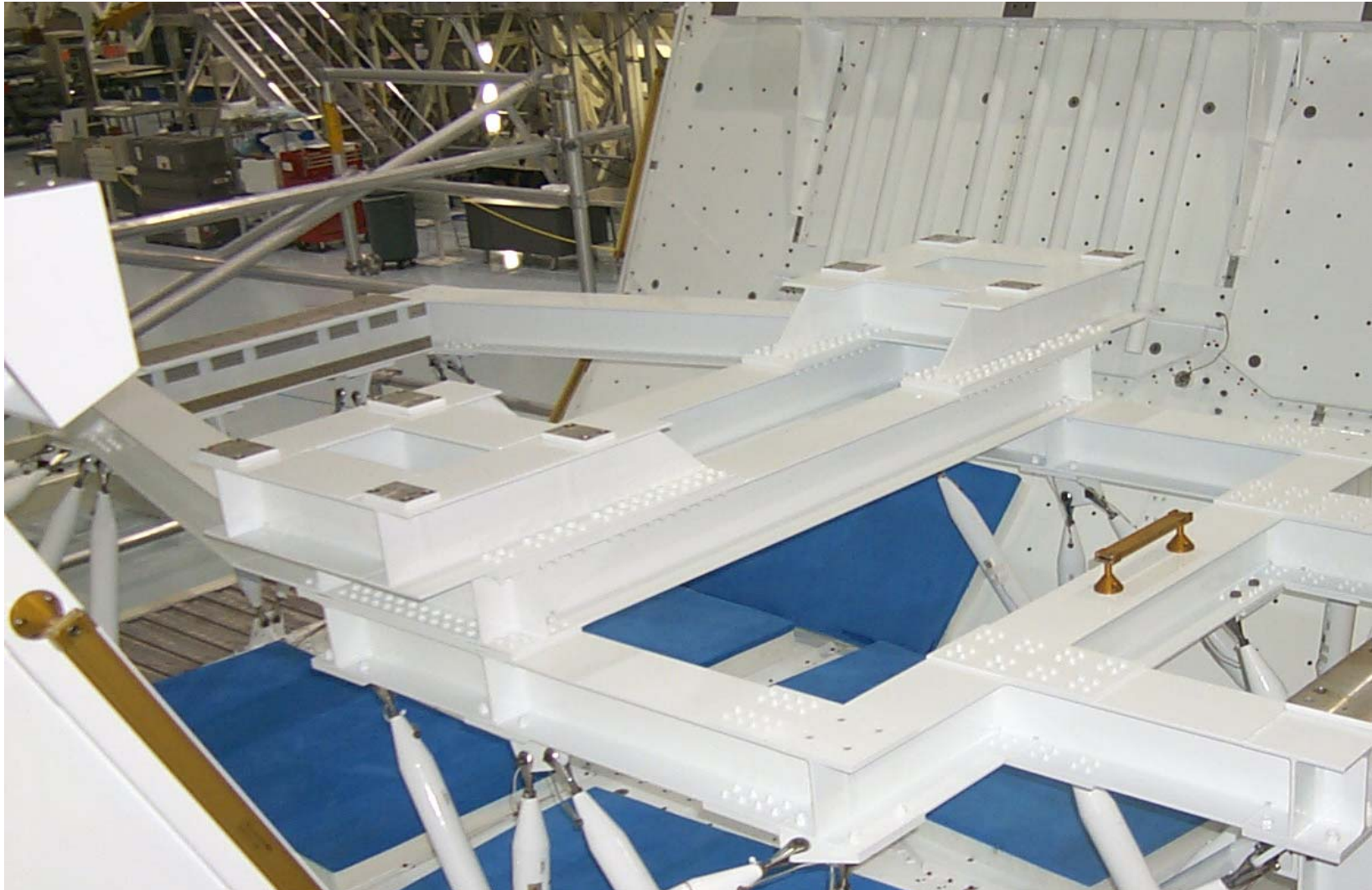
Slide Bar



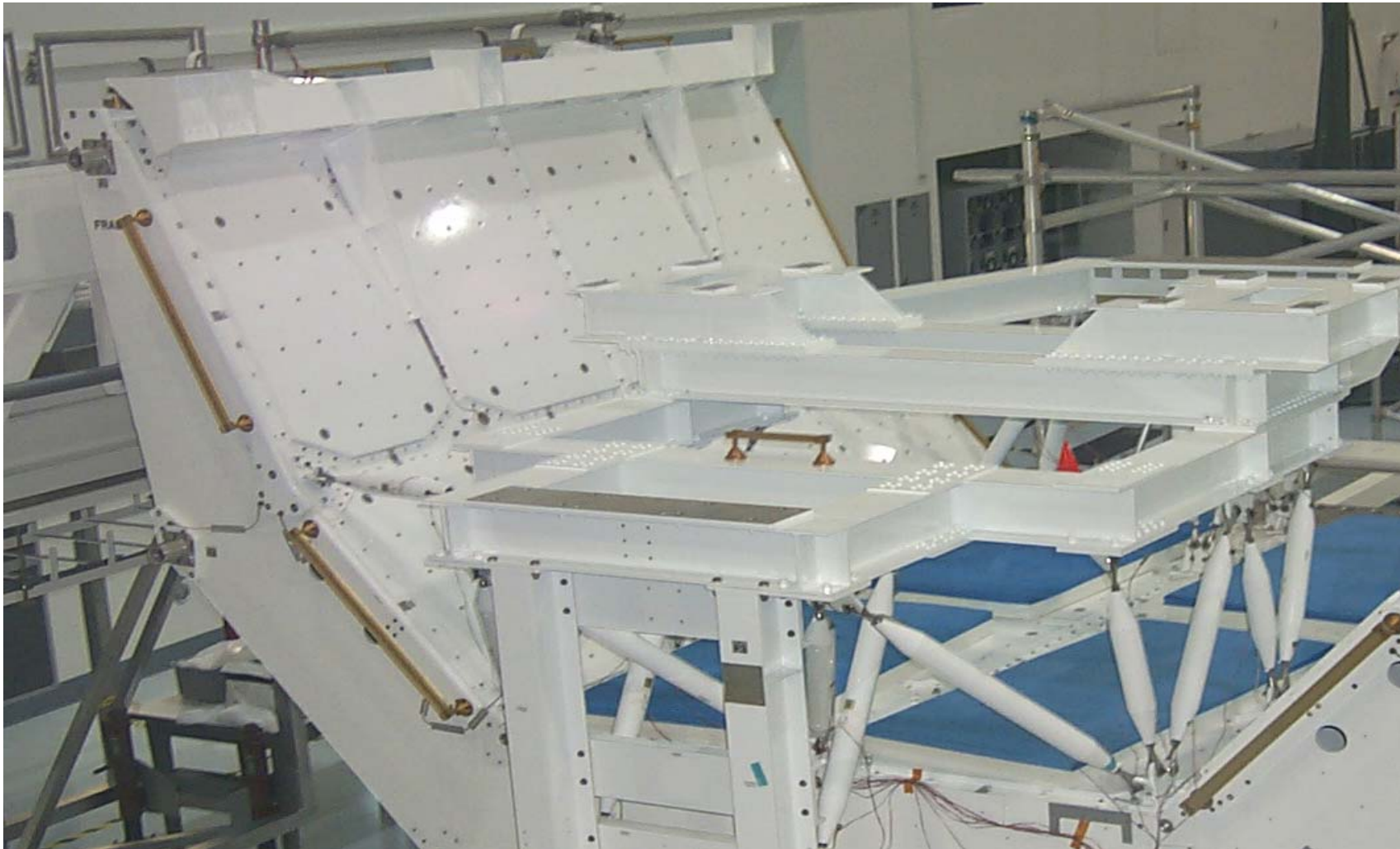
SSRMS Bolts



LSA in SLP



LSA Opposite Side



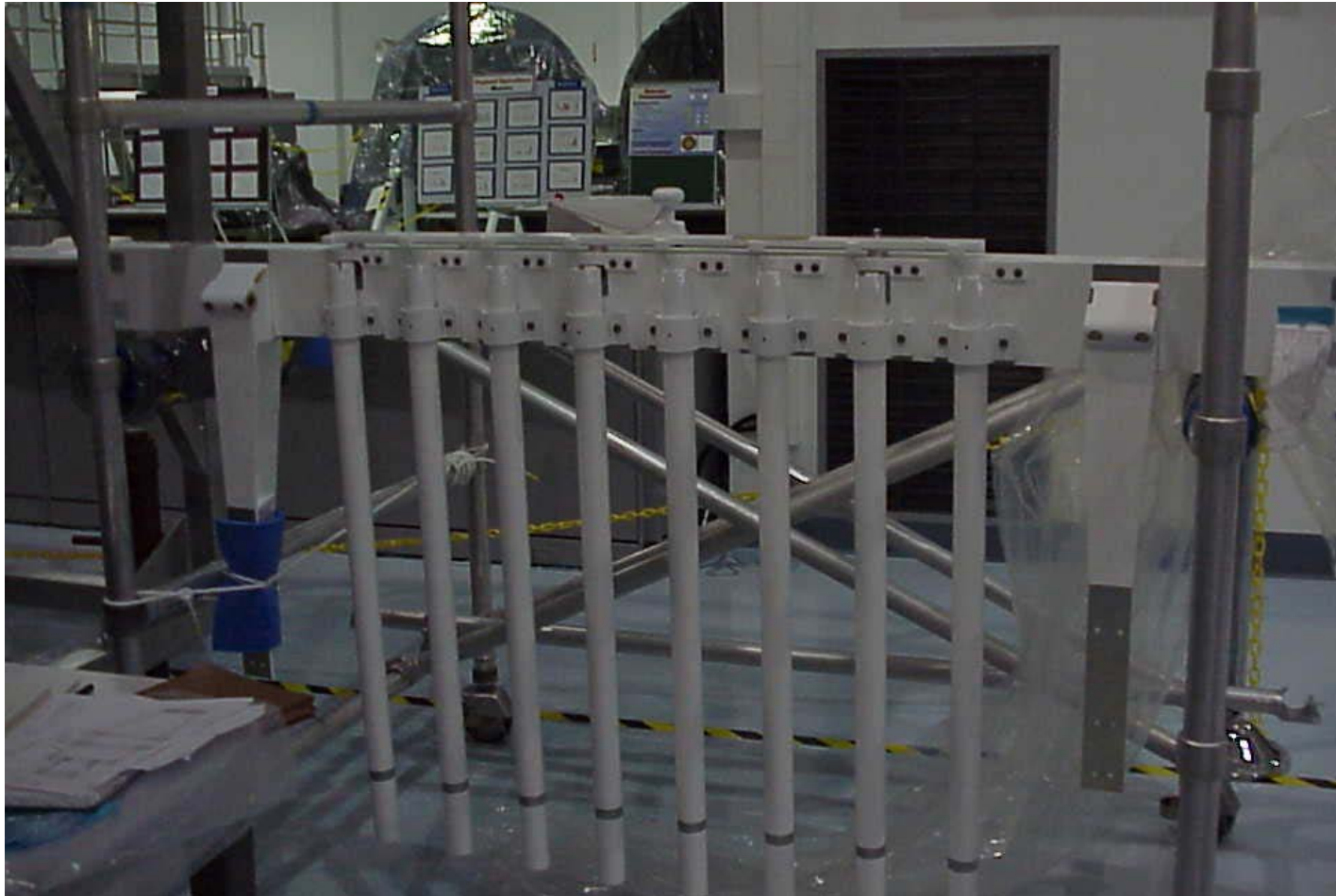
SSRMS Connection to LSA



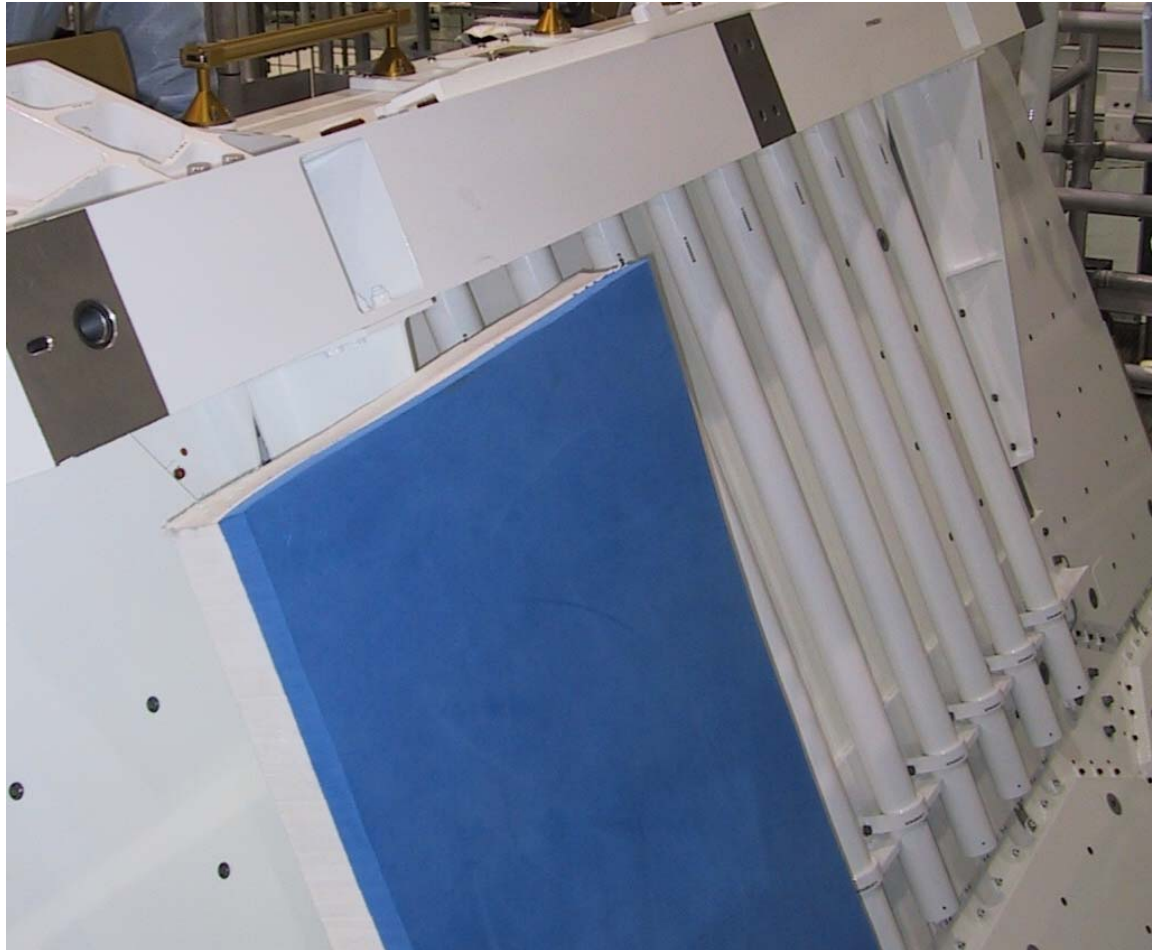
Bolt Stowage Adapter



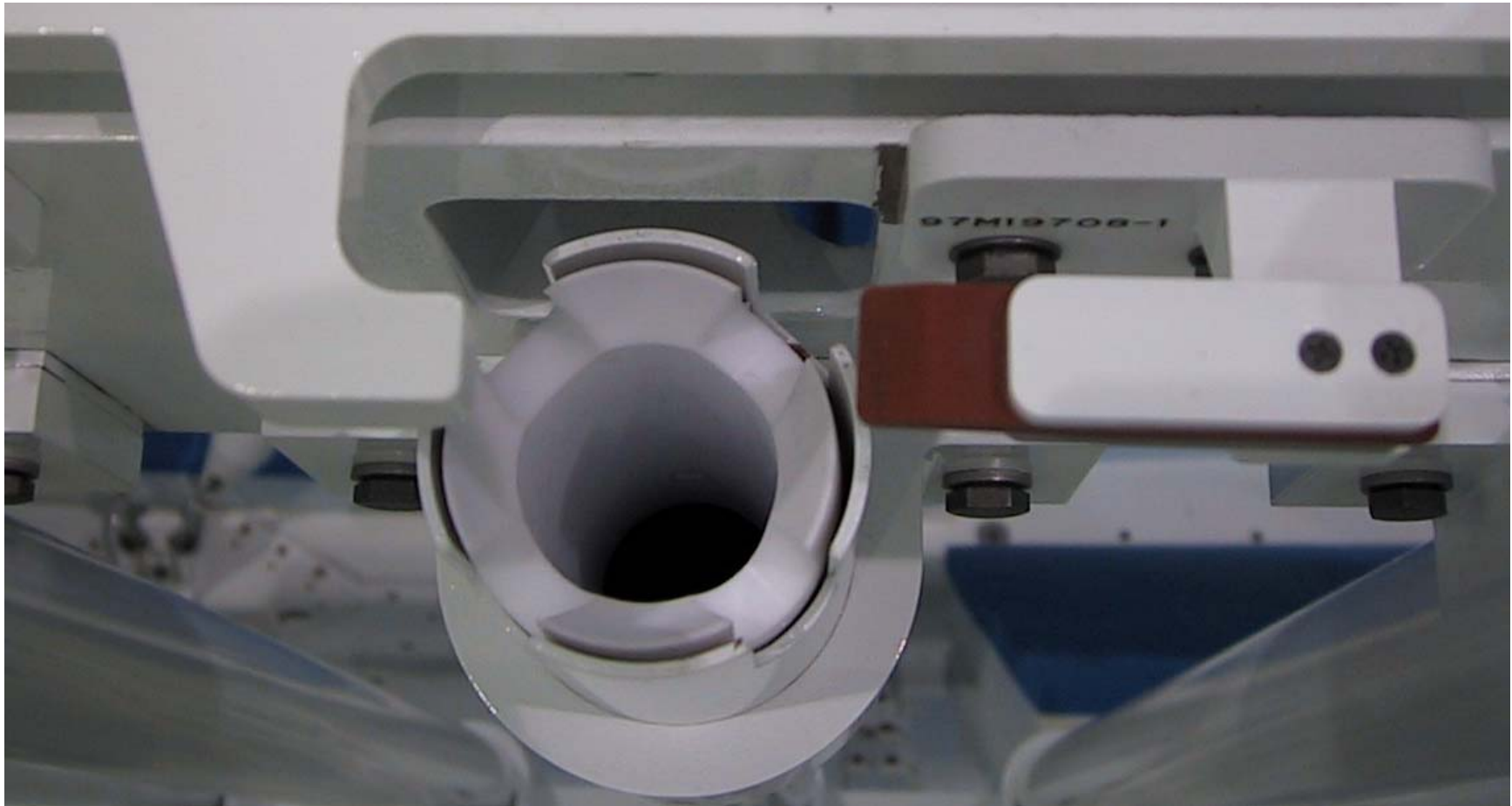
Bolt Stowage Tubes Installation



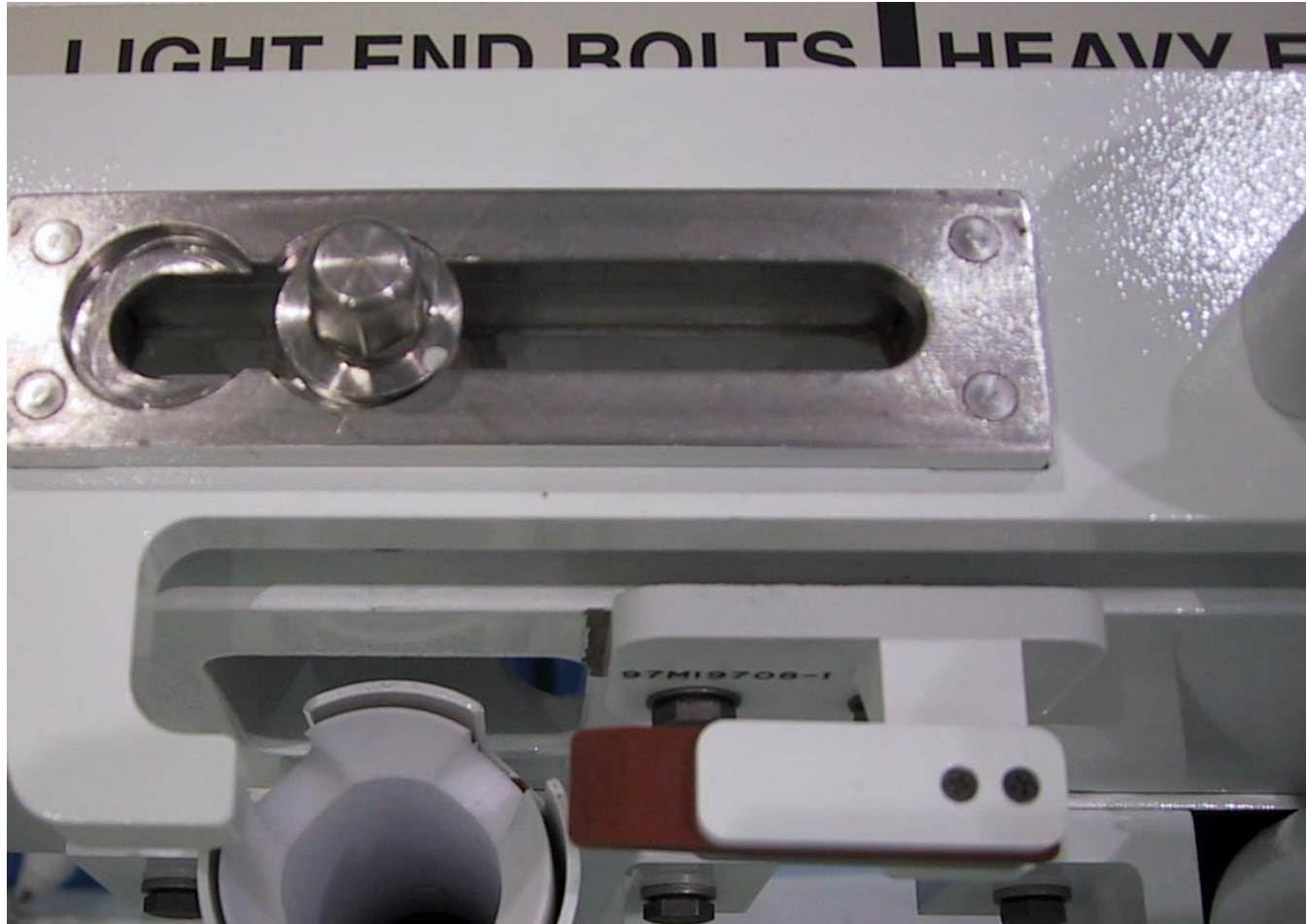
Bolt Stowage Tubes



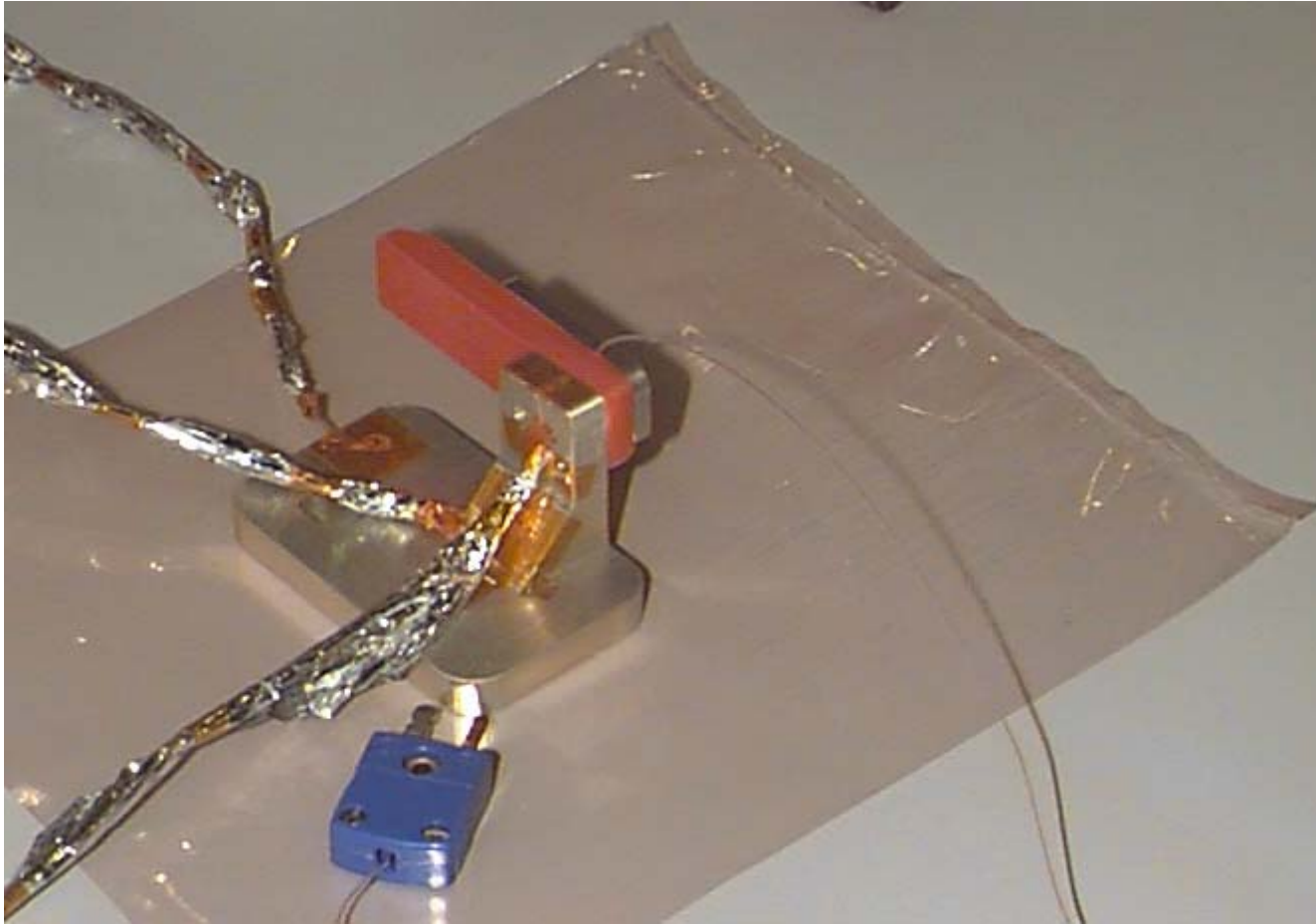
Bolt Stowage Assembly



Instructions

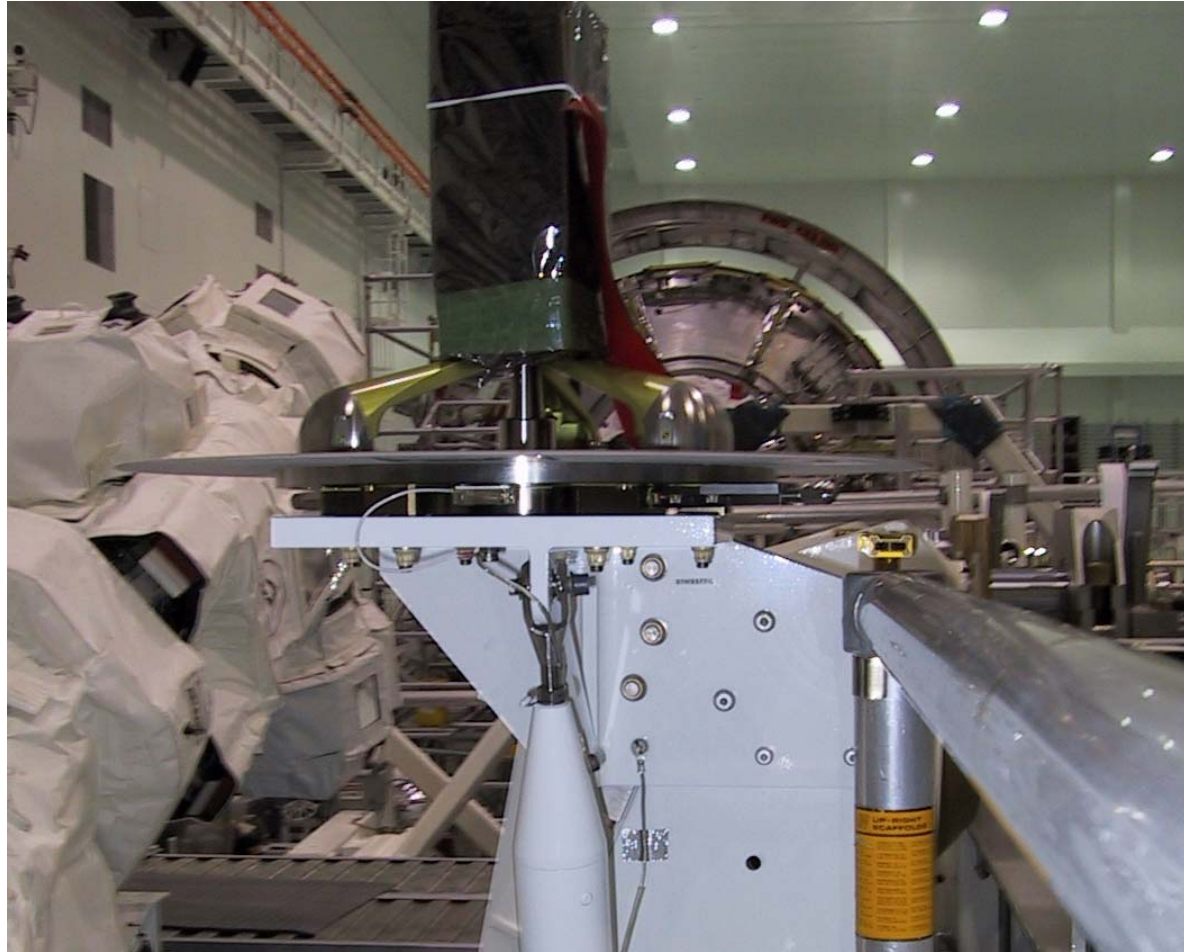


Soft Dock Assembly Test

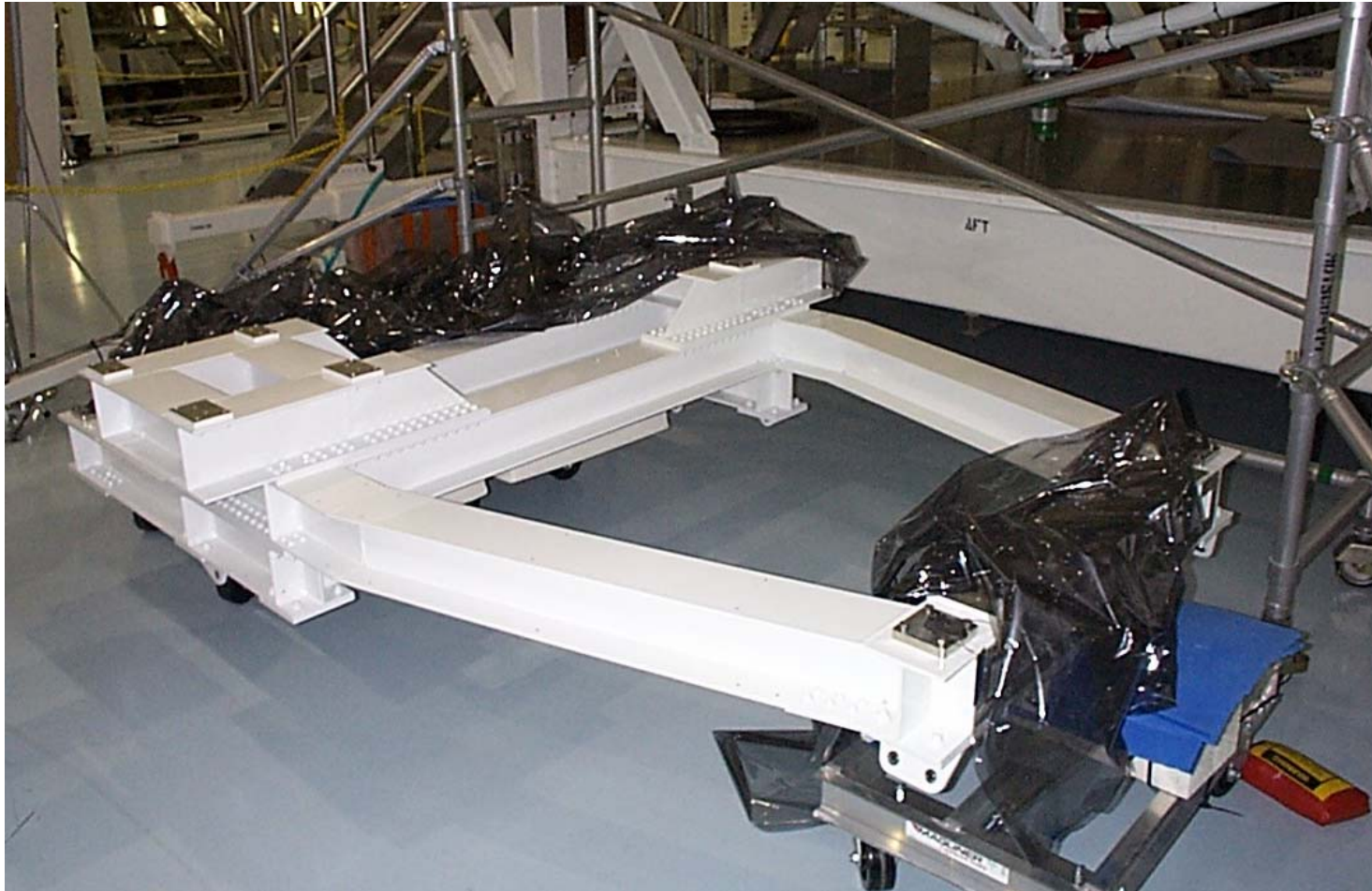




FRGF & Adapter



LSA



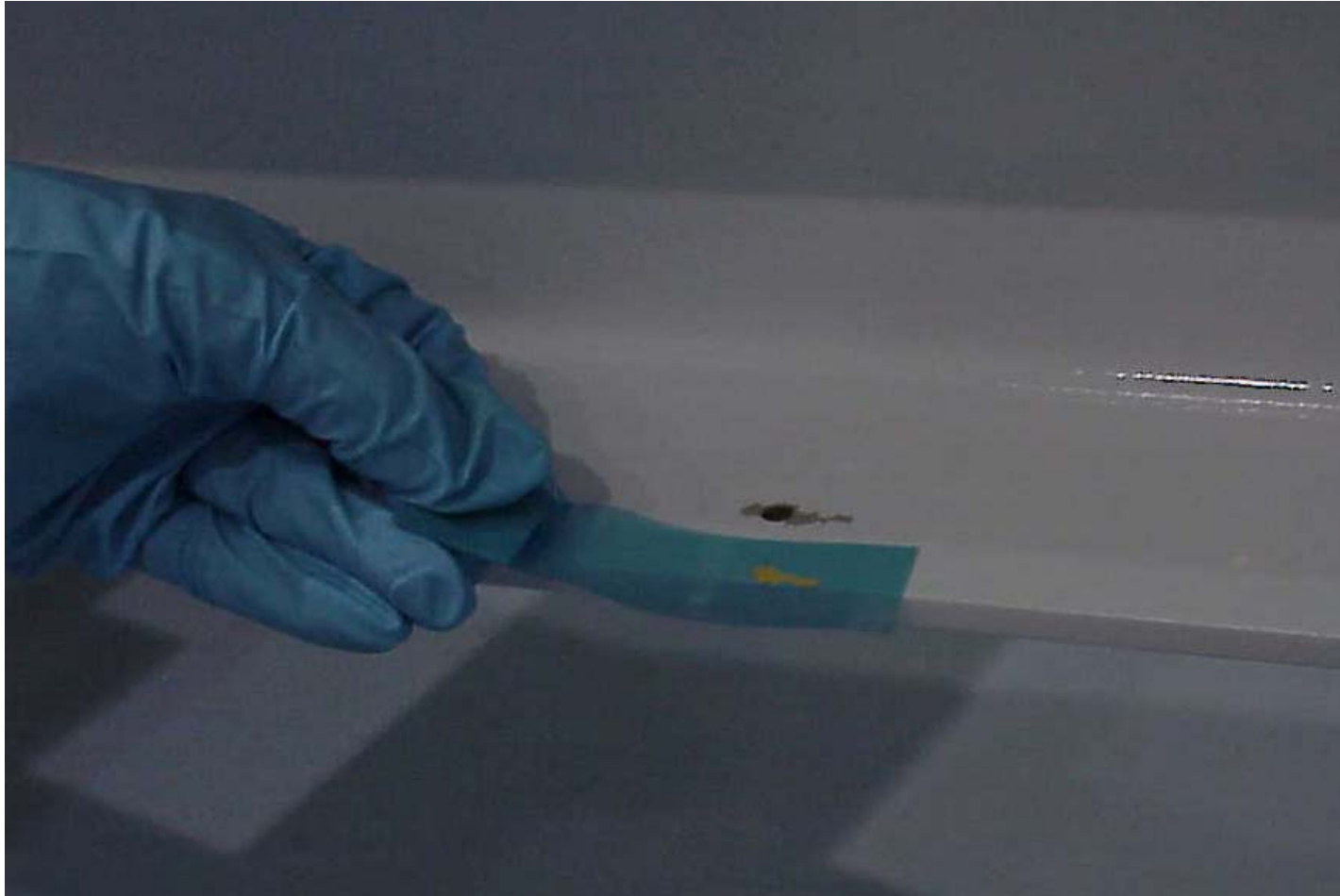
Paint Peeling



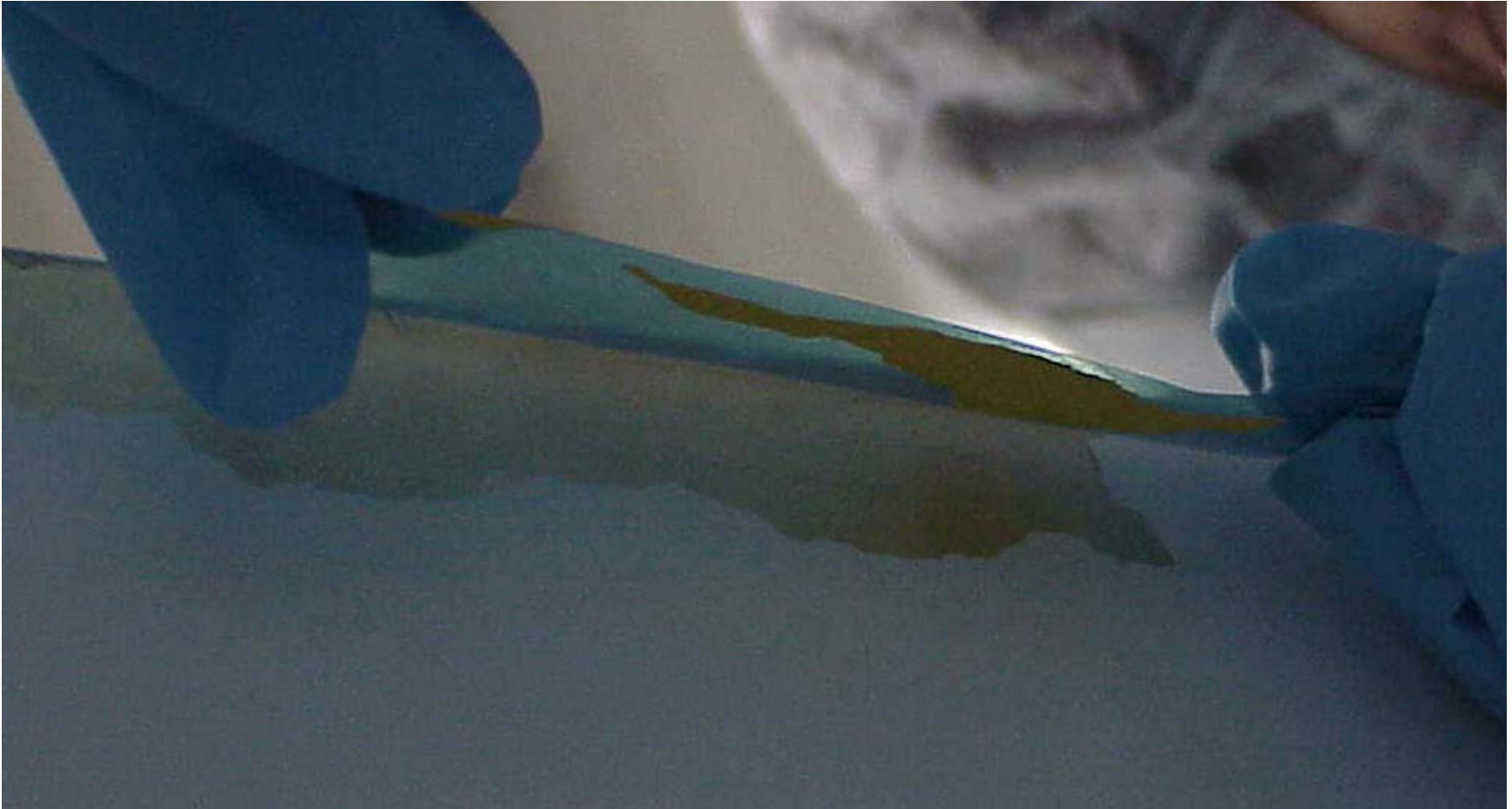
More Peeling



Paint Test



Negative Results



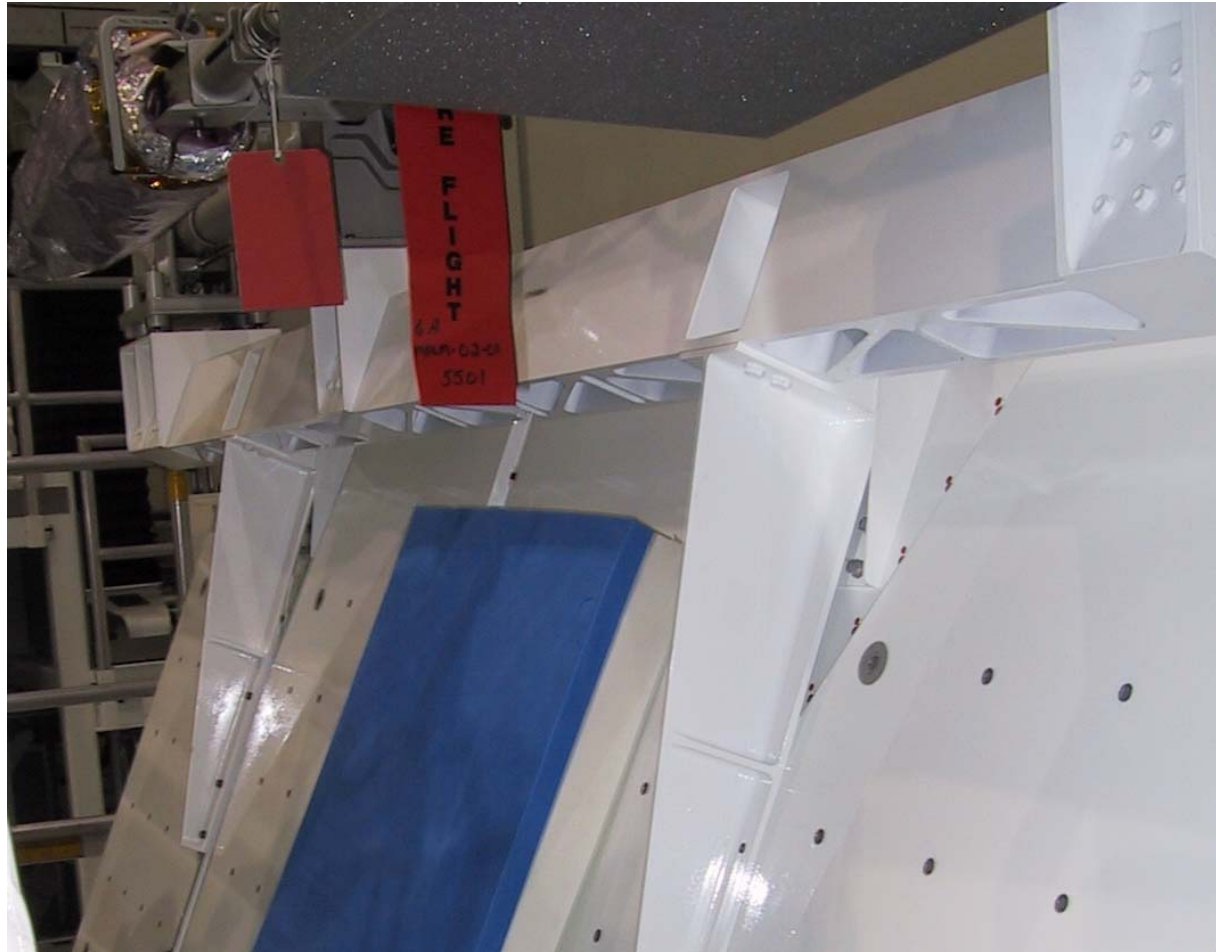
Spherical Bearing from 7A



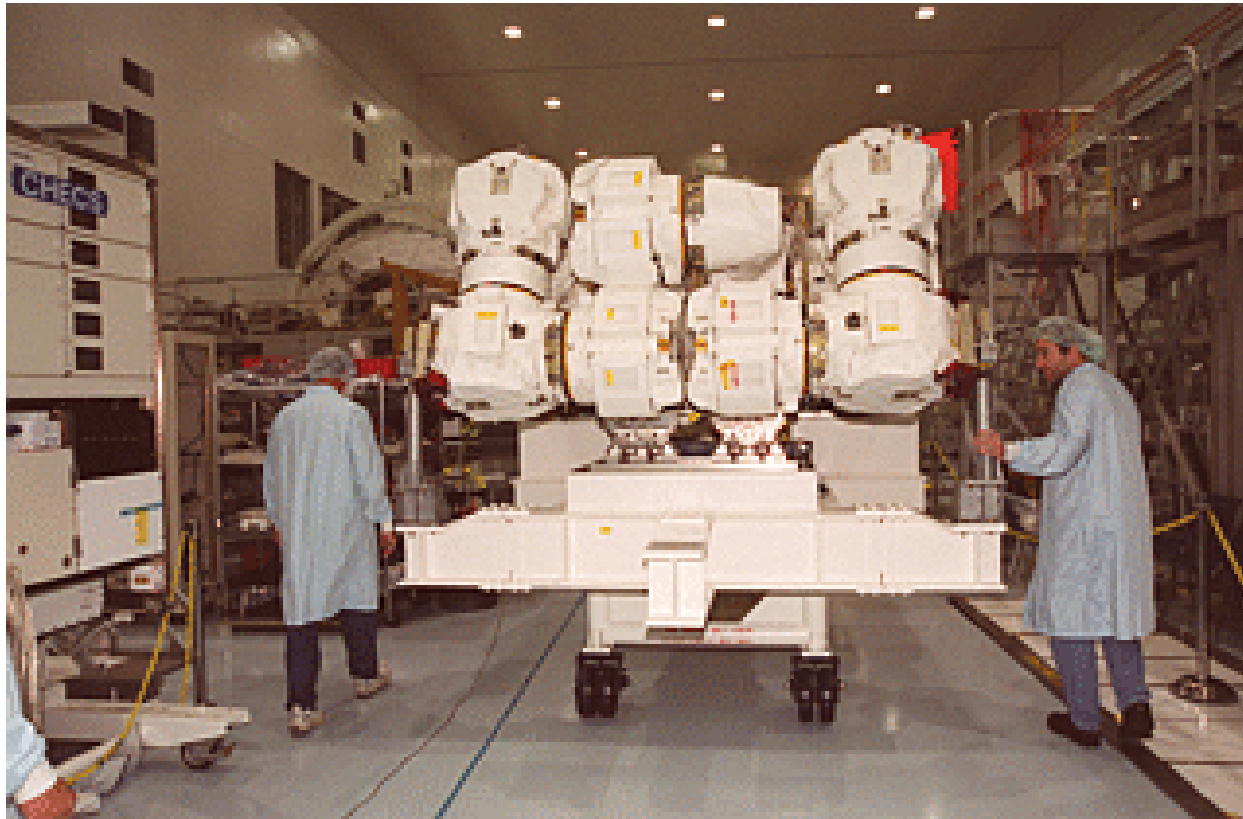
UHF Antenna, Scuff Plates, & Dog Bone Handrails

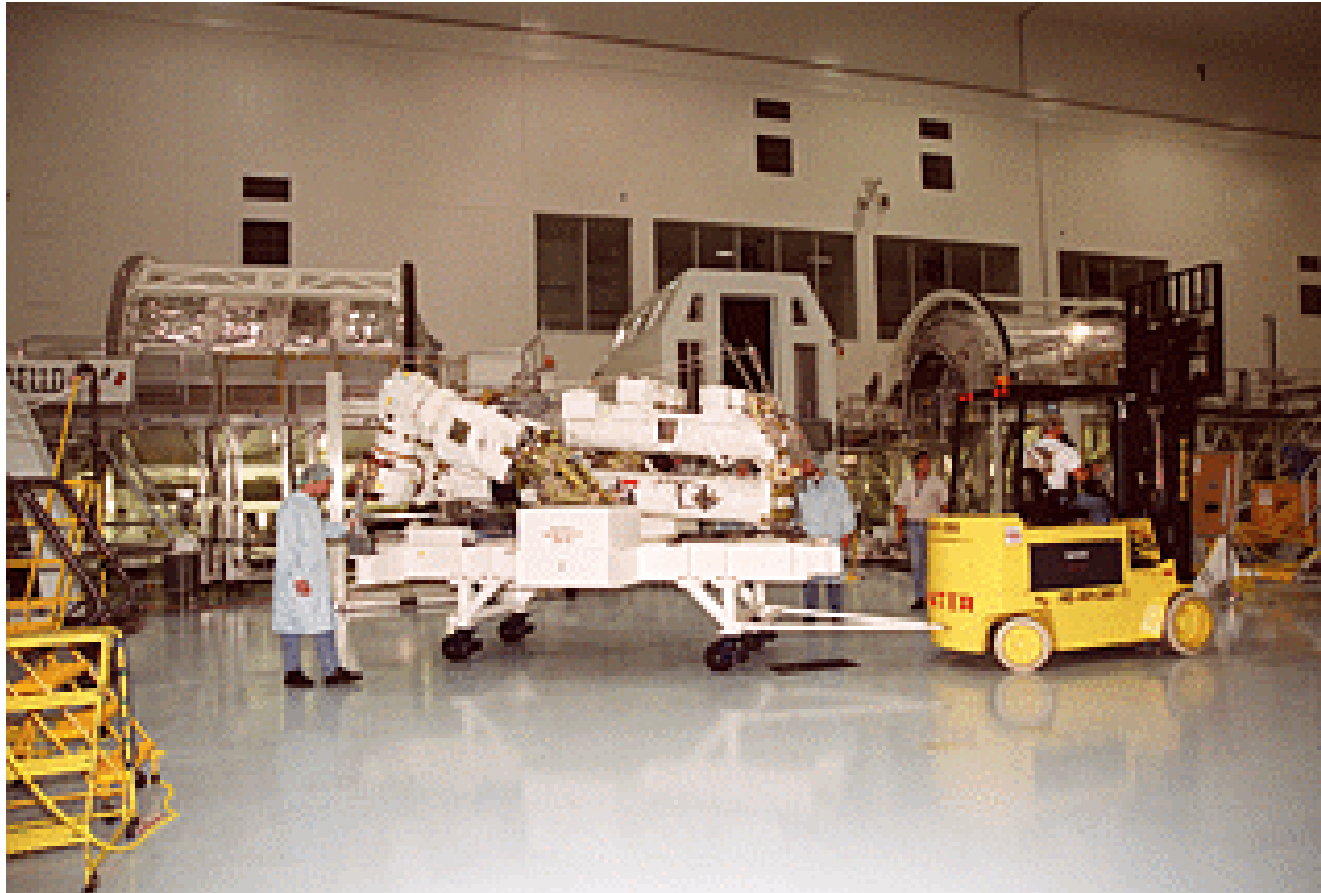


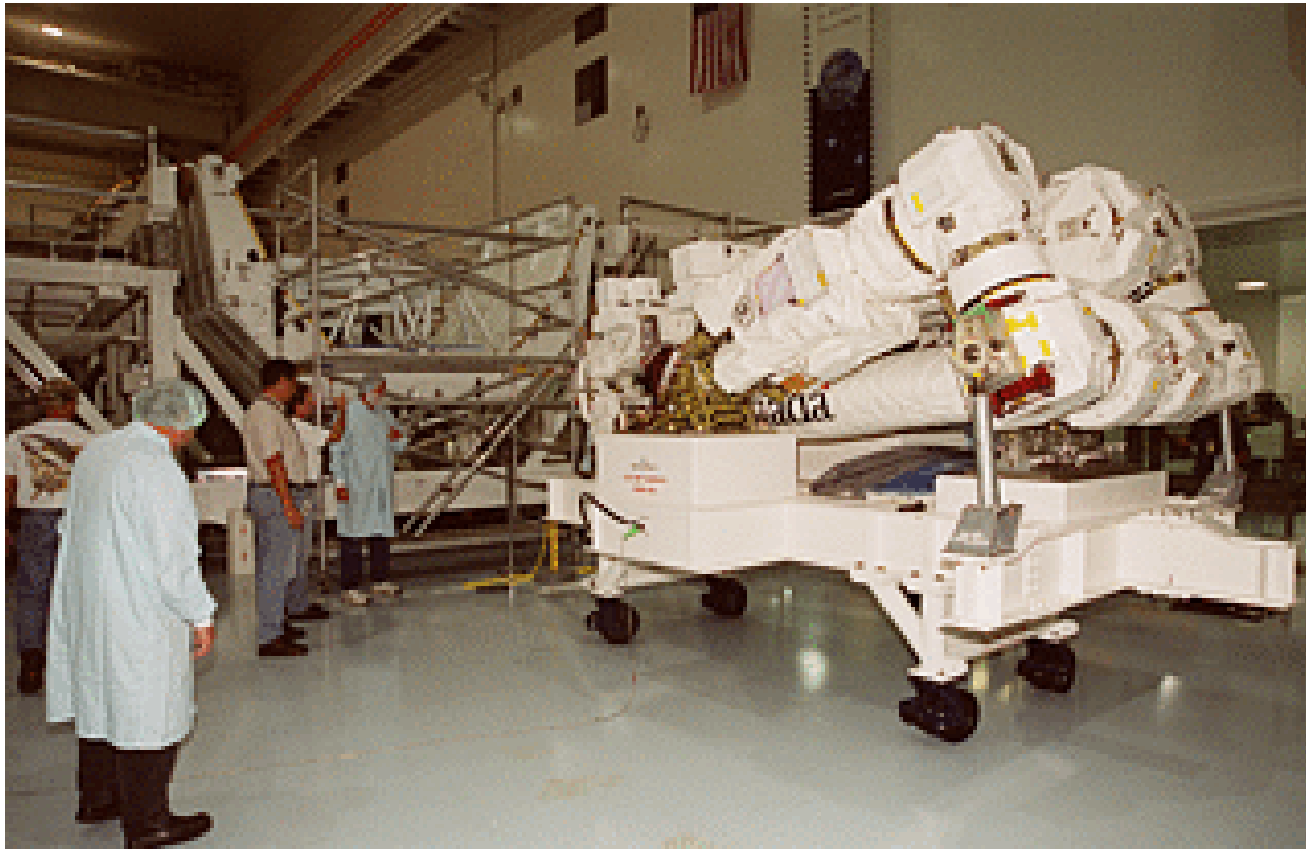
UHF Antenna Box Beam



The Canadian arm is moved in the SSPF for testing

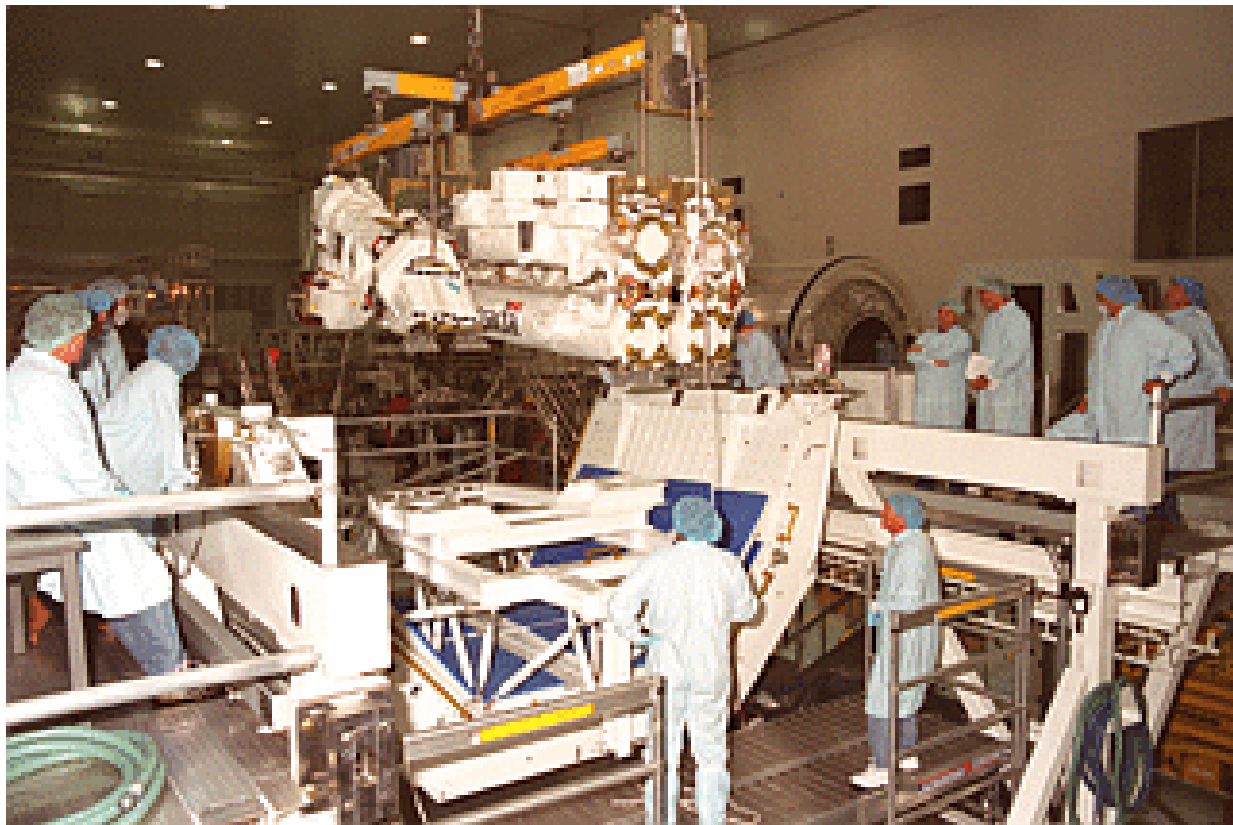


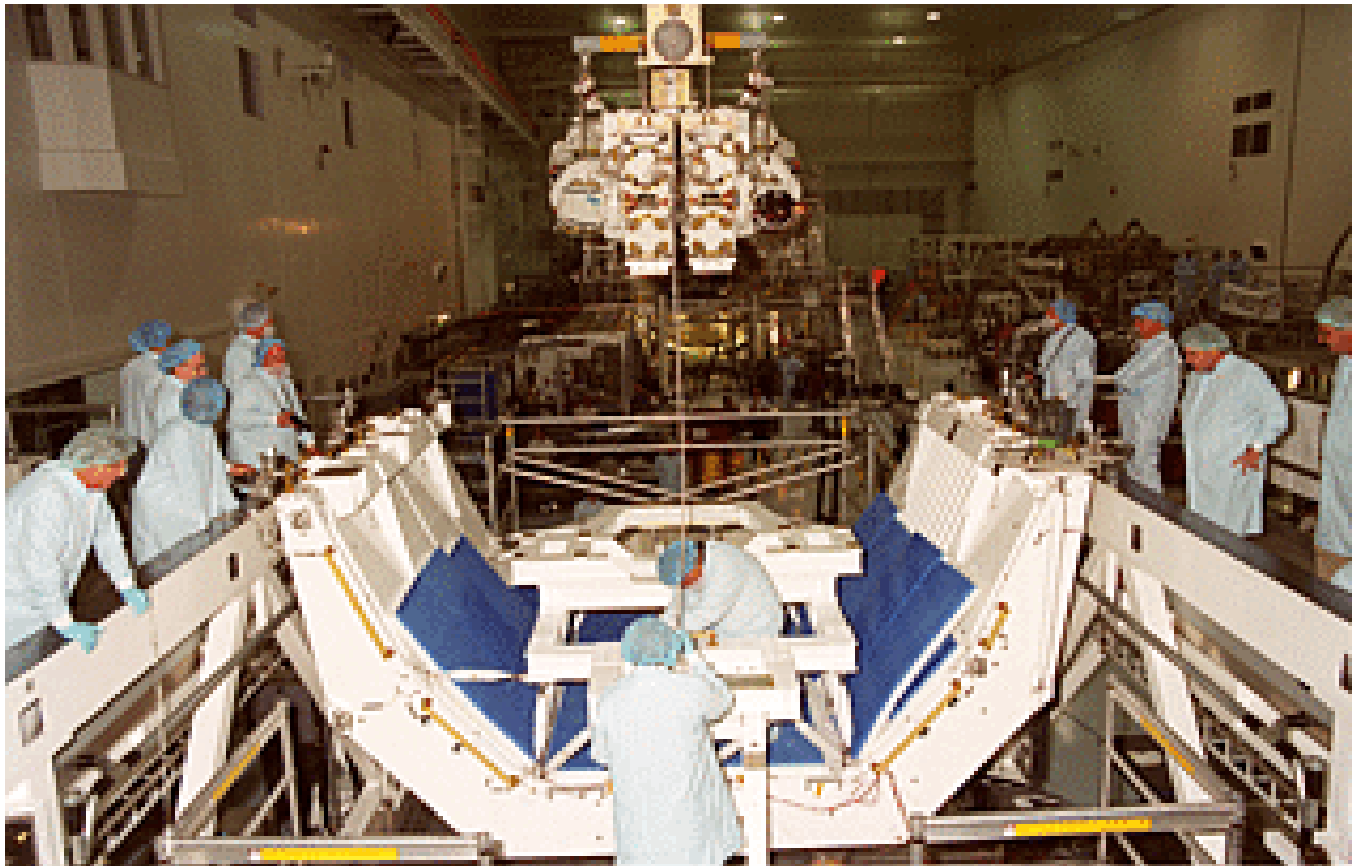




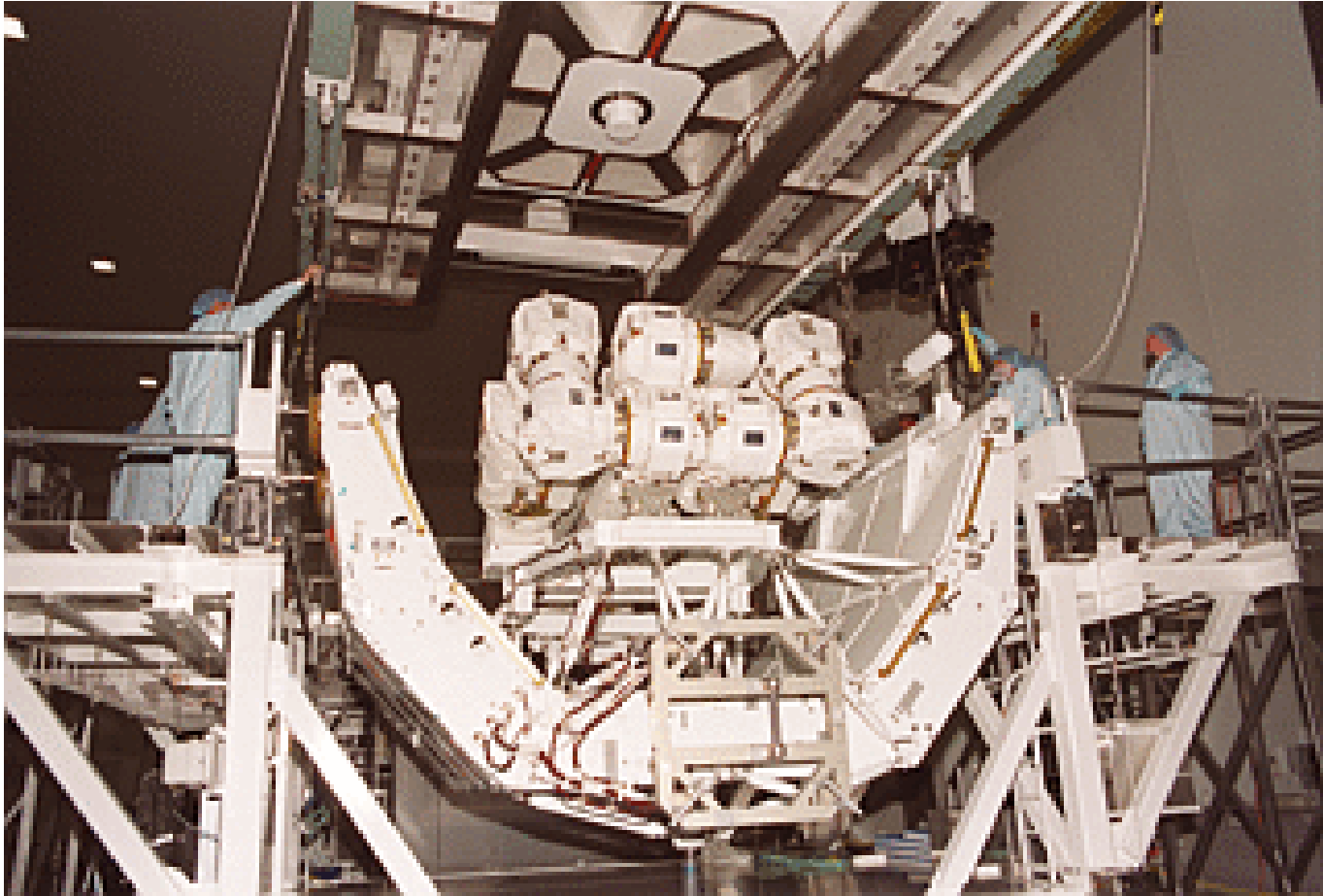
Drilling of SSRMS via IDT

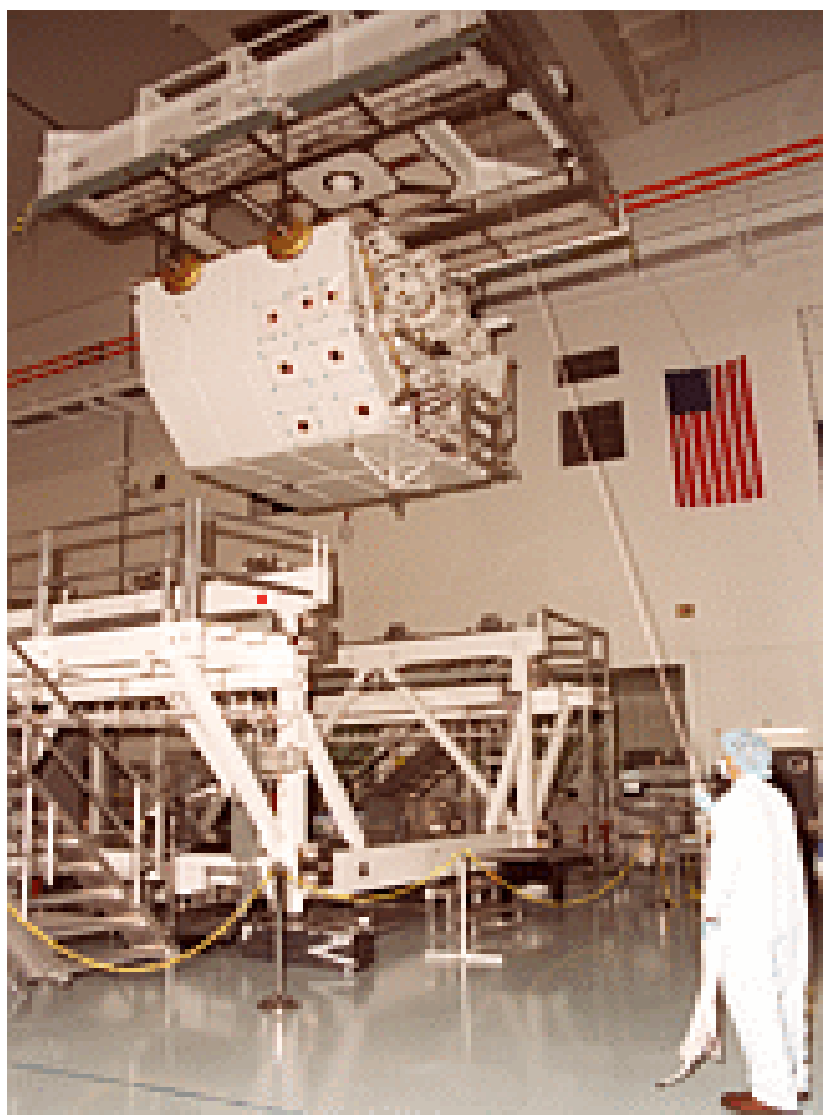


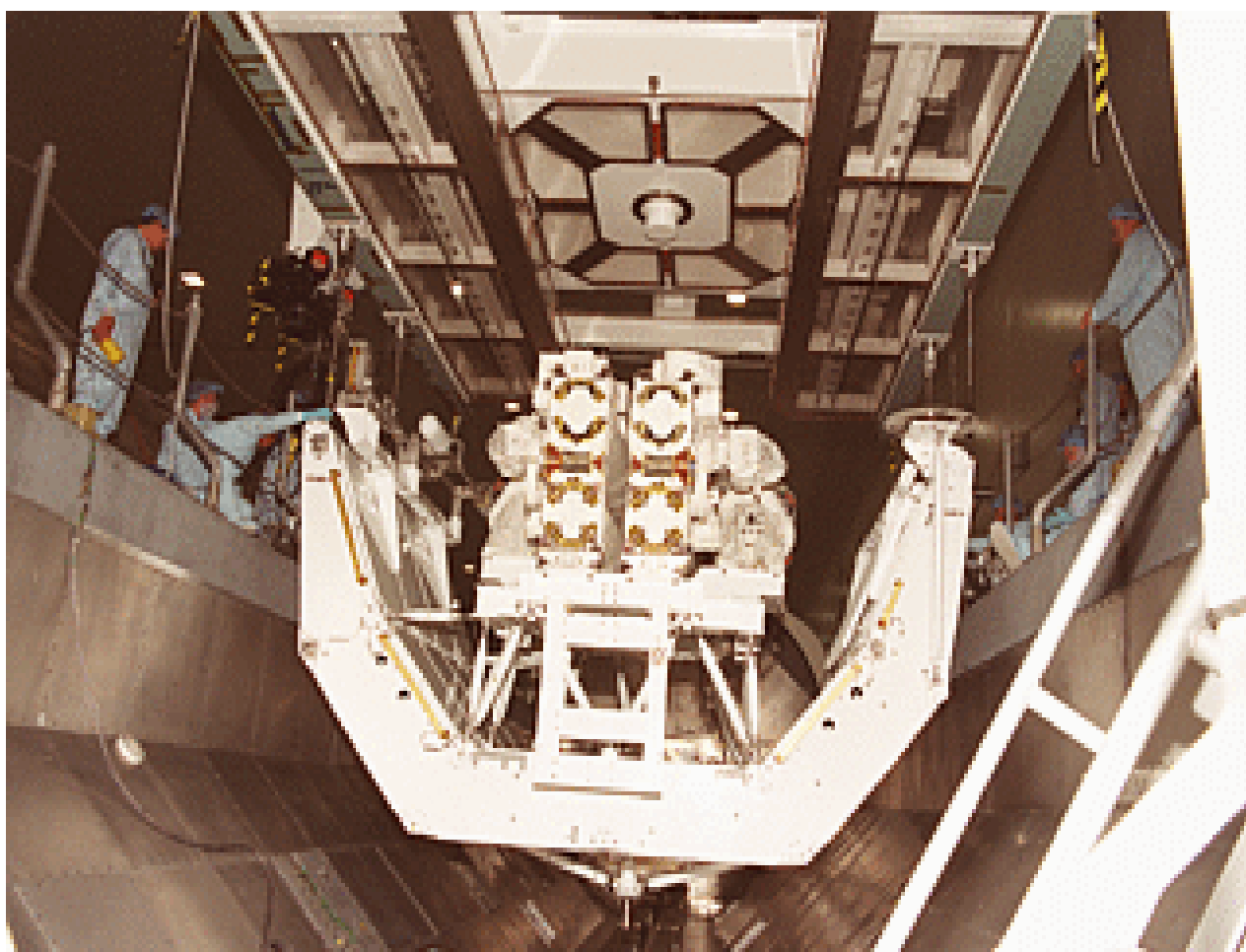












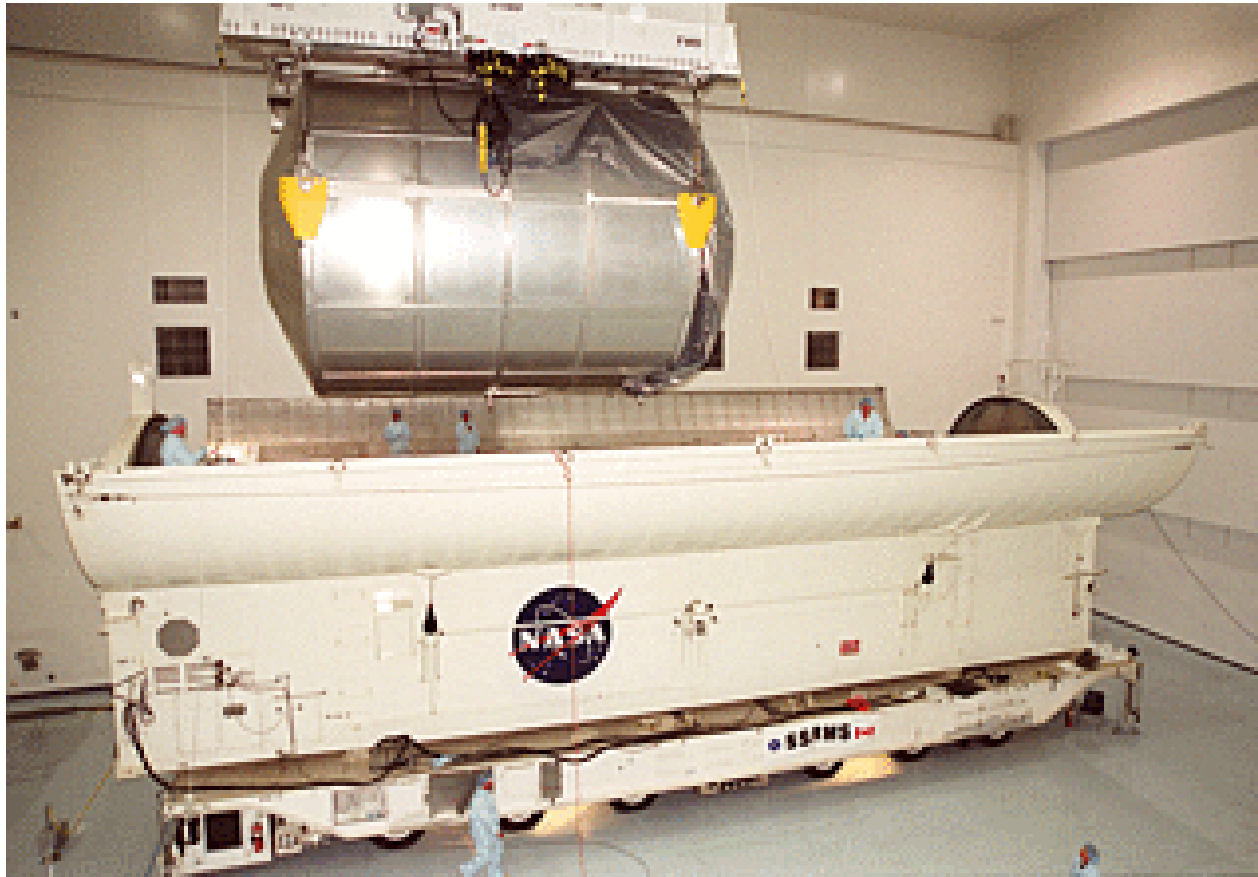
Flight 6A



Payload Canister

- Workers inside the payload canister wait for the Multi-Purpose Logistics Module Raffaello to be lowered inside. It joins the Canadian robotic arm, SSRMS, already in place. Both elements are part of the payload on mission STS- 100 to the International Space Station. Raffaello carries six system racks and two storage racks for the U.S. Lab. The arm has seven motorized joints and is capable of handling large payloads and assisting with docking the Space Shuttle. The SSRMS is self-relocatable with a Latching End Effector so it can be attached to complementary ports spread throughout the Station's exterior surfaces.
- Launch of STS-100 was April 19, 2001 at 2:41 p.m. EDT from Launch Pad 39A.

STS-100 MPLM Raffaello is moved to the payload canister



Mission Specialist Scott E. Parazynski practices maneuvers on a simulator for installing the Canadian-built Space Station Remote Manipulator System (SSRMS). He and Mission Specialist Chris A. Hadfield will undertake two spacewalks to install the SSRMS.



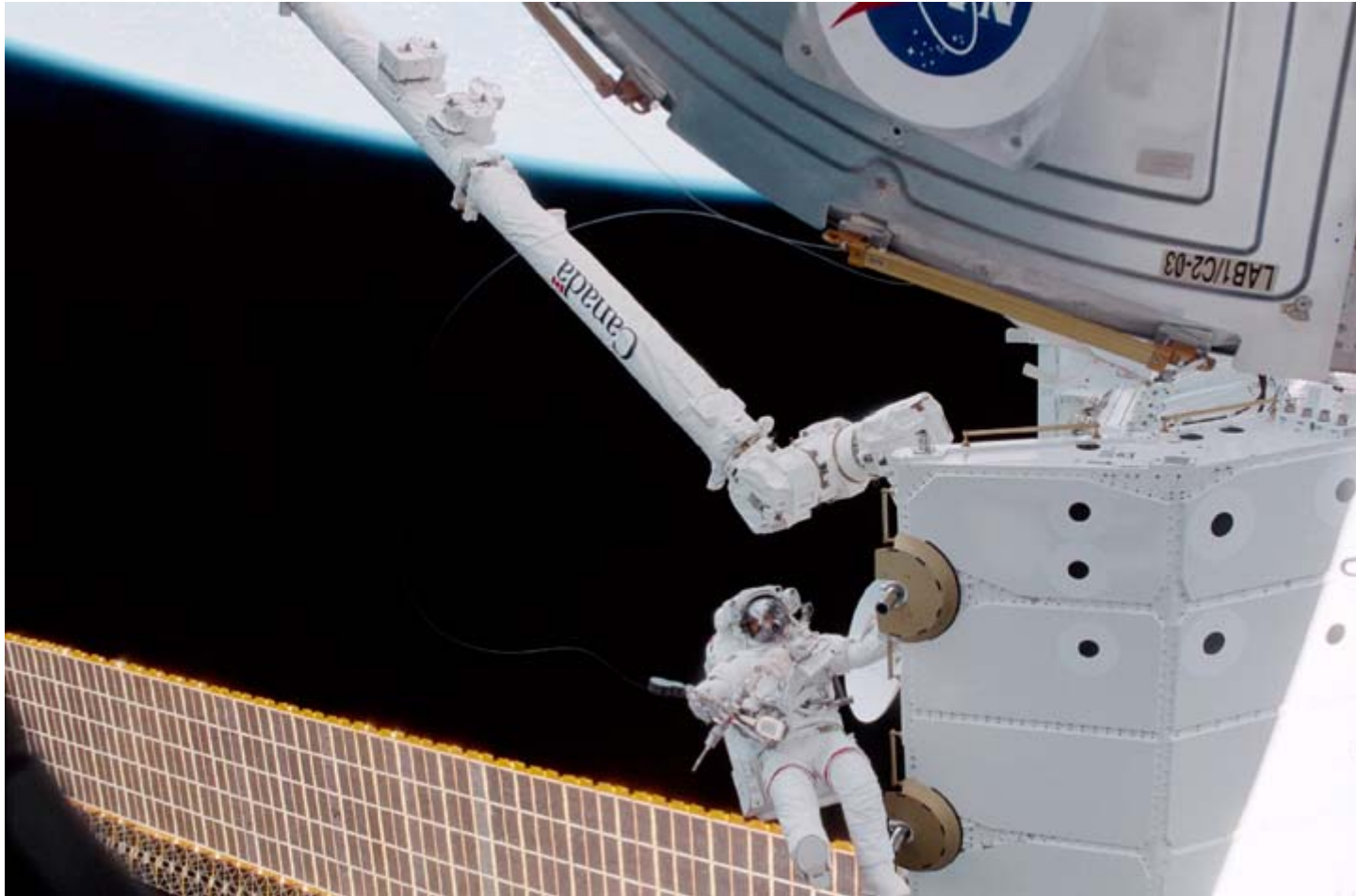
Terminal Countdown Demonstration Test and Crew Equipment Interface Test activities



MSFC Buy Off

- Design
- Thermal
- Structural
- EVA
- Mass Properties
- Loads
- Materials
- Mechanisms
- Safety
- Payload Carriers
- Chief Engineer

Astronaut Hadfield Near Canadarm2



Handshake

- A Canadian "handshake" in space occurred on April 28, 2001, as the Canadian-built space station robotic arm (Canadarm-2) transferred its launch cradle over to Endeavor's robotic arm. Marning the controls from the shuttle's aft flight deck, Canadian Mission Specialist Chris A. Hadfield of the Canadian Space Agency (CSA) was instrumental in the activity. The Spacelab pallet that carried the Canadarm2 robotic arm to the station was developed at the Marshall Space Flight Center (MSFC) in Huntsville, Alabama.

Canadian "Handshake in Space"



A Canadian "handshake in space" occurred on April 28, 2001 as the Canadian-built space station robotic arm (right) transferred its launch cradle over to Endeavour's Canadian-built robotic arm.



Astronaut Chris A. Hadfield stands on one Canadian-built robot arm to work with another one.



Destiny laboratory with pallet attached



International Space Station
photographed after separation from
the Space Shuttle Endeavour.

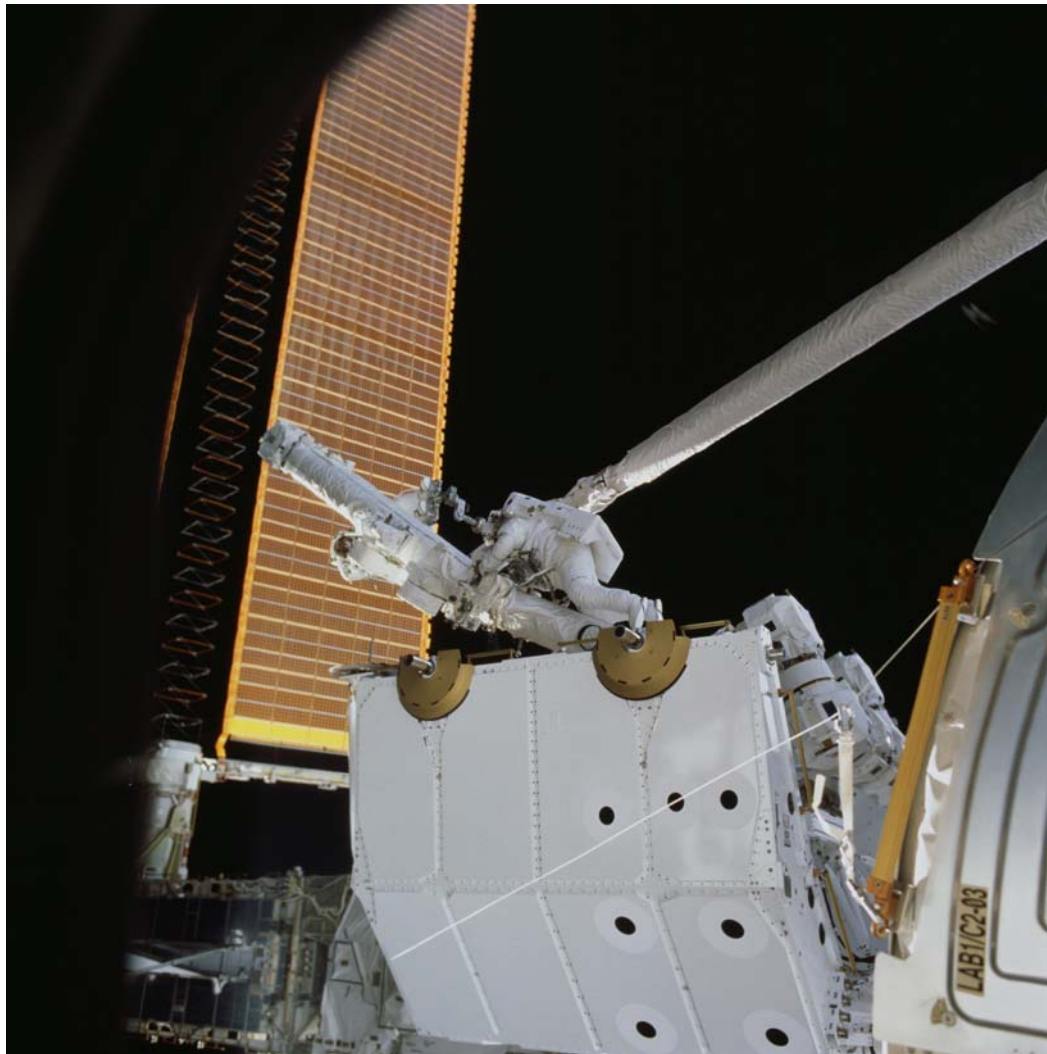


STS-100 Onboard Photograph



Astronauts Scott E. Parazynski (center frame) and Chris A. Hadfield (partially obscured) prepare to unpack the new Space Station Remote Manipulator System (SSRMS) or Canadarm2 during the first of two

STS-100 space walks



Canadarm2 Maneuvers Quest Airlock STS-104





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Manicouagan Reservoir in Quebec, Canada, Manicouagan Reservoir marks the site of an impact crater, 60 miles (100 km) wide, which, according to scientists, was formed 212 million years ago when a meteorite crashed into this area.



Space Shuttle Endeavour touches down on a desert runway at Edwards Air Force Base in California to complete the STS-100 mission.

Touchdown occurred at 9:11 a.m. (PDT), May 1, 2001.

